MSc Project Report

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“Ask any of us ‘can you show me the data?’ We barely have it”: A qualitative study of research priorities on infant and young child feeding in emergencies

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Abstract

Background

Humanitarian emergencies can compromise child feeding practices through forced displacement, unsolicited provision of breastmilk substitutes, inadequate sanitation, and food insecurity. With limited resources and increasing populations affected by emergencies, it is paramount that research on infant and young children in emergencies (IYCF-E) focuses on the most pressing priorities. This study aims to determine what these are.

Methods

This was a qualitative study. I conducted thirteen semi-structured interviews using an interview guide via Zoom. In total, twenty-three were invited to participate, four declined and six failed to respond. Of the thirteen, ten were recruited using purposive and three through snowball sampling. Questions related to ten previously published research priorities in IYCF-E. Participants had at least five years of experience in IYCF-E as practitioners, policymakers, or researchers. I analysed them deductively based on this study's objectives and inductively to allow for identification of additional themes. This was done using thematic analysis with NVivo software.

Results

All participants commented on the lack of research on IYCF-E. Specifically, a recurring theme was the lack of evidence on impact and effectiveness across interventions. Most participants stated that critical priorities are the effectiveness of complementary feeding interventions and how to safely provide breastmilk substitutes. There is scanty evidence in the literature on IYCF-E, and in general, participants perceptions of this evidence on the research priorities aligned with the actual availability of evidence. These evidence gaps hinder IYCF-E programmes and, ultimately, health outcomes.

Conclusions

This study indicates that evidence generation should now be targeted at comparing the effectiveness of different complementary feeding interventions, and how to safely provide breastmilk substitutes without compromising breastfeeding. Future research must be focused on the implementation of IYCF-E interventions to determine their effectiveness, which would result in routine application and policy changing practices.

Acknowledgements

I would like to extend a huge thank you to all my study participants who took the time out of their busy schedules to share their views with me. Without your valuable insights, this project would not have been possible. I would also like to thank my supervisors for their ongoing support, encouragement, and guidance. I have learnt so much from both of you. Importantly I would like to extend my most profound appreciation for the Commonwealth Scholarship Commission, whose funding made this entire master's degree possible. Lastly, I would like to thank my classmates (particularly my revision buddies), my friends, my family, and my partner for providing endless encouragement, comic relief, coffee breaks and words of wisdom.

Statement of Academic Contribution

Project development

My external supervisor and their Emergency Nutrition Network colleagues generated the project's idea. They requested a 'stock take' and an update on the research priorities in infant and young child feeding in emergencies as previously determined by Prudhon et al.[1] To streamline the project and to build my qualitative research skills, I asked for it to purely be a qualitative study, which both supervisors supported.

Contact, input, and support

My internal supervisor provided feedback on my ethics form before submission and suggested some possible frameworks I could use to guide the project. Although I chose a different framework, these suggestions helped me to find the framework I eventually decided on. I had four 20-30 minute meetings with them, in which they provide advice on qualitative research methods. My external supervisor gave me a list of potential participants and their contact details. Once I began writing the project, I had five 20-30 minute meetings in which they provided general guidance on the development of the project, and I provided feedback on how it was progressing. In a joint meeting, my internal and external supervisors suggested changes to my topic guide, which I used to make improvements on it. Following this my internal supervisor made direct edits on it to improve it further.

Main research work

I collected, analysed, and drew conclusions from the qualitative data on my own. My external supervisor helped identify infant and young child feeding in emergencies (IYCF-E) research repositories, which aided in the identification of relevant literature for the background and discussion. My internal supervisor sent me additional studies conducted in refugee camps that I incorporated into the background and discussion.

Writing-up

I worked alone to write the project. My external supervisor provided general comments on the content of my background and then on the final draft of the project to ensure it met their requirements. This led me to reframe terminology, add additional key literature that they provided, and be more explicit in my explanations. My internal supervisor provided comments on an outline of my background and one draft of the project. This led me to edit the title of the project, add a few additional pieces of key literature that they provided as well as simplifying my framework and restructuring my interpretation of the results against the framework. These

comments from both of my supervisors were used to produce, and ultimately improve the final submission. I am most grateful for their time.

Abbreviations and definitions

IYCF: Infant and young child feeding
WHO: World Health Organization

Breastmilk substitutes: Any food/drink represented as a replacement for breastmilk, whether appropriate for that purpose or not.

Complementary foods: Foods (solid/semi-solid) that are introduced in addition to breastmilk. Ideally, age-appropriate, adequate, and safe.

Dietary diversity: The number of different foods or food groups consumed over a given reference period, which serves as a proxy for diet quality.

Exclusive breastfeeding: When an infant receives only breastmilk and no other liquids or solids, even water, except for vitamin/mineral supplements or medicine for the first six months of life.

Humanitarian emergencies: An event or series of events that represents a critical threat to the health, safety, or wellbeing of a population

Infant and young child feeding in emergencies (IYCF-E): Refers to the support and protection of the nutritional needs of non-breastfed and breastfed infants, young children from birth until two years, and pregnant and lactating women in humanitarian emergencies.

Wasting: When a child has a low weight-for-height, also known as acute malnutrition. It is an indication of recent and rapid severe weight loss; however, it can continue for a long period of time.

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1. Introduction

1.1. Mortality and infant and young child feeding

Globally, countries have eight years to meet the Sustainable Development Goal of ending preventable deaths of newborns and children under five[2]. Although the United Nations have pledged that no one would get left behind[3], the under-five mortality rate (76 deaths per 1000 live births) of children who reside in 38 fragile and conflict-affected countries is triple that of children living in all other countries[4]. This is partly due to substandard sanitation, limited health services, food insecurity, and poor infant and young child feeding (IYCF) practices[5,6]. IYCF encompasses how a child is fed from birth until two years.

Infant and young child feeding in emergencies (IYCF-E) refers to the support of the nutritional needs of non-breastfed and breastfed infants, young children from birth until two years, and pregnant and lactating women in humanitarian emergencies[7]. Optimal IYCF, generally and in emergencies, entails exclusive breastfeeding for the first six months of life, followed by the appropriate introduction of nutritious and safe complementary foods, and continued breastfeeding until two years or older[8]. Globally, if all children were breastfed, it is estimated that 823 000 deaths in children under five years may be avoided, with 13.8% of these being children under two[9]. Breastmilk provides antimicrobial and immunological benefits, reduces inflammation, and impedes infectious microorganisms in infants[10]; it particularly has a protective effect against diarrhoea and respiratory illnesses[11]. Compared to exclusively breastfed infants between the ages of 0 and 5 months, those not breastfed have a 14-times higher risk of all-cause mortality and 8.7-times higher risk of infection-related mortality[12].

Suboptimal dietary practices such as the inadequate introduction of complementary foods, a critical aspect of IYCF, are an underlying and immediate cause of child undernutrition[13] and consequent mortality. A diet of poor quality or insufficient quantities and persistent illness can lead to weight loss. A child who has rapidly lost a significant amount of weight has an increased risk of all-cause mortality and infection-related mortality, particularly from measles, diarrhoea, and pneumonia[14]. It is estimated that if proper complementary feeding counselling is provided to food-secure individuals, and additional appropriate food supplements are provided to food-insecure individuals, that 221 000 deaths in children under five years may be avoided[15].

1.2. Infant and young child feeding in emergencies

Humanitarian emergencies impact countries across the globe and can occur because of 'man-made' and so-called 'natural' causes. 'Man-made' causes include conflict and violence, while 'natural' causes can include flooding, droughts, and earthquakes. It is estimated that 235 million people required humanitarian assistance in 2021, with the expectation that this will increase to 274 million in 2022[16]. Globally, displaced people make up 1% of the world's population, and almost half of these are children[16]. Figure 1 indicates the countries impacted by conflict (shown in orange) and natural disasters (blue) in 2020. Conflict and violence primarily afflict African and Middle Eastern countries, while natural disasters affect populations worldwide.

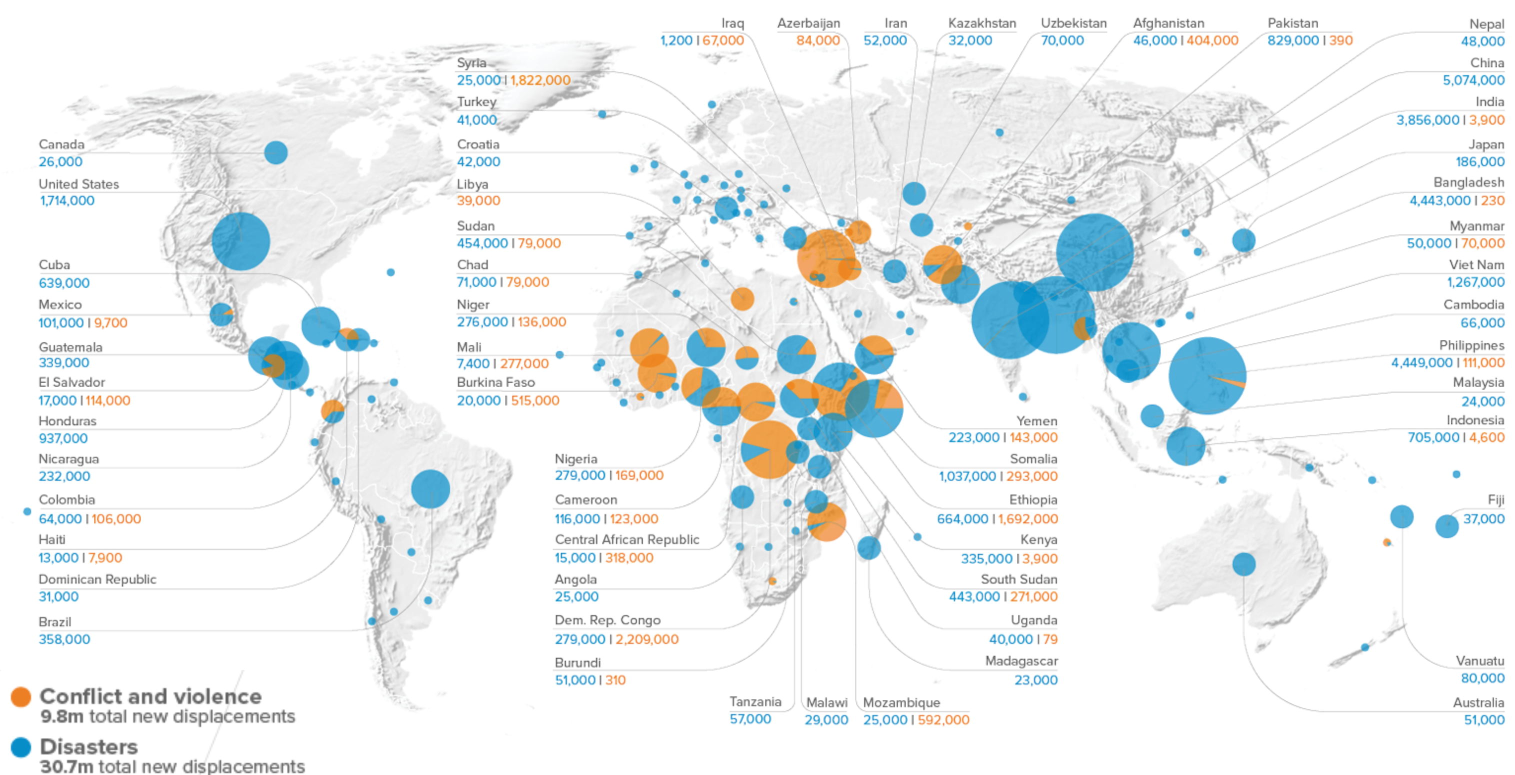

Figure 1: Map of internal displacement of populations because of conflict and natural disasters in 2020[78]

Regardless of the location or cause of a humanitarian emergency, it can disproportionally affect the health of vulnerable members of the population. Infants and young children are amongst the most vulnerable[17]. There is a shortage of robust evidence on exclusive breastfeeding rates in humanitarian emergencies. In war-afflicted Iraq, exclusive breastfeeding rates at six months have been estimated to be as low as 6%[18]. Additionally, each one-unit increase in the conflict casualty rate, a proxy for the severity of conflict, was associated with an almost three percentage-point decline in the probability of being exclusively breastfed at six months[18]. Dietary diversity is a simple proxy for diet quality and nutrient

density. In Somalia, where droughts and conflict are frequent, only 15% of children living in internally displaced person camps met the recommended minimum dietary diversity[19]. In Nigeria, similar findings indicate that conflict and displacement significantly reduced households' dietary diversity[20]. Furthermore, in Algeria's refugee camps where families rely on food aid, a high concurring prevalence of obesity in women and undernutrition in women and children was found[21]. This illustrates some of the ways emergency settings have been shown to impact infants, young children, and their caregivers.

Humanitarian emergencies compromise breastfeeding through multiple pathways. It is common for breastmilk substitutes to be widely distributed, in a solicited or unsolicited and often harmful manner, in emergency settings[22,23]. They may be provided without sufficient instruction on safe usage[24], leading to incorrect preparation and infants being over-or under-fed. Emergency settings often lack secure areas for women to breastfeed, leaving them feeling unsafe, uncomfortable and that breastfeeding is a burden[5,22,24,25]. Additionally, there may be a lack of health system support. These factors may culminate in women changing feeding practices and ceasing breastfeeding. Following this, caregivers may be unable to prepare breastmilk substitutes hygienically, as sanitation is frequently compromised[23]. These changes in feeding practices, related to interrupted breastfeeding and increased breastmilk substitute use, are associated with an increased incidence of diarrhoea, malnutrition, and mortality[26–28].

Similarly, humanitarian emergencies can hinder the safe introduction of complementary foods. Food supplies can be interrupted, reducing dietary intake and quality[19]. Displaced caregivers must counter these challenges while meeting the nutritional needs of their children while travelling. A caregiver's mental health, an often-neglected aspect, may be negatively impacted thereby influencing their ability to care for their child[29]. This suboptimal introduction of complementary foods increases a child's risk of mortality through the development of micronutrient deficiencies, acute malnutrition, and increased risk of infections[30]. To help counter this, various interventions are employed to support IYCF-E.

1.3. Interventions for infant and young child feeding in emergencies

Examples of interventions for supporting IYCF-E include providing baby-friendly spaces, cash transfers, and supplementary feeding programmes, and integrating these into other sectors in emergencies, such as sanitation and food security. Due to prior concerns of protecting and supporting breastfeeding it is only recently that interventions have been expanded to specifically support non-breastfed infants. Although technical guidance on implementing IYCF-E interventions is well documented[7,23,31–34], there is a lack of empirical evidence on their

effectiveness and impact on IYCF indicators. Other reviews have highlighted this lack of evidence[1,35–39].

For instance, baby-friendly spaces are designed to provide a safe environment for women to receive psychosocial, breastfeeding, and health education support in emergency settings[40]. One evaluation of the intervention in Cameroon found a reduction in observed breastfeeding difficulties[41]. However, others did not assess the impact on IYCF outcomes in their evaluations[42,43]. In settings where breastmilk substitute use is high and breastfeeding rates are low, such as Syria, reflections on programming previously indicated a lack of guidance on how best to support non-breastfed infants[44]. A recent UNICEF[45] publication illustrates how to safely provide breastmilk substitutes as an intervention to support these infants. However, there lacks evidence on its implementation. Cash transfers aim to help individuals and households improve their food security and diet quality[7]. A meta-analysis of non-emergency settings found that they slightly increased children's dietary diversity[46]. While in humanitarian emergencies, cash transfers have been found to have varying effects on IYCF outcomes. In Pakistan, they were found to reduce acute malnutrition in children[47]; whereas in Somalia[48], despite it increasing childhood dietary diversity, and in Niger[49], where dietary diversity was not assessed, it was not found to have this effect. Blanket supplementary feeding programmes are used to counter food insecurity. In an emergency, they have been noted to contain high amounts of starchy foods and limited fruit and vegetables[21]. This limit in quantity and quality may not meet the dietary needs of children under two years[50] and, as stated earlier, populations who are heavily reliant on them present with both obesity and undernutrition, further indicating their unsuitability[21]. In addition to these prescribed interventions, recent guidelines emphasise the importance of integrating IYCF, generally and in emergencies, into other sectors[51,52]. For these interventions to have the intended impact, substantive evidence and cooperation between sectors supporting humanitarian emergencies is needed.

1.4. Research on infant and young child feeding in emergencies

Humanitarian emergencies are complex and unpredictable, affecting the quantity and quality of available research. Affected populations often have, or are at risk of, poor health and reside in substandard living conditions making it unethical to withhold treatment in order to study a control group[39,53]. Additionally, multiple interventions are often implemented simultaneously, making it challenging to attribute outcome changes to one aspect, outside of experimental conditions[54]. These challenges are compounded further by funding limitations and competing stakeholder interests[55]. This provides some clarity as to why there is a lack of robust, empirical evidence on IYCF-E. Yet it is imperative that programmes and interventions dealing with

vulnerable groups, such as women and children, particularly in volatile settings, be evidence-based[56]. For these reasons, research in IYCF-E must be targeted at the most pressing matters.

In 2016, Prudhon et al. acknowledged this lack of evidence in IYCF-E and conferred with various experts, identifying ten research priorities on the subject (Table 1)[1].

Table 1: Research priorities in IYCF-E and priority ranking[1]

Research priority	Priority rank
To what extent is cash transfer used to buy breast milk substitutes?	1
What are the effectiveness and cost-effectiveness of different complementary feeding interventions per se and comparatively, i.e., distribution of different food supplements, such as blended foods, ready-to-use foods, micro-nutrient powders, fresh foods; cash transfer; and vouchers assistance in different contexts, on IYCF-E practices, nutritional status, and morbidity?	2
What is the long-term effect of IYCF-E interventions, such as baby tents after major natural disasters and IYCF-E component of CMAM programmes, on IYCF practices of caretakers enrolled in the interventions, e.g., feeding colostrum, exclusive breastfeeding up to six months, dietary diversity for children more than 6 months?	3
In contexts where pre-emergency breastfeeding rates are low and breast milk substitutes use is high, how to effectively design IYCF-E programmes: at the same time as protecting, promoting, and supporting breastfeeding, what is the most effective mechanism for supplying breast milk substitute (either in kind, through voucher assistance or cash transfer), and how can it be best managed?	4
How to design re-lactation interventions and what are their effectiveness and cost-effectiveness on re-lactation rate?	5
How to provide effective psychological support to caretakers of infant and young children in different contexts, e.g., presence or absence of qualified staff?	6
How to determine the number of potential beneficiaries and the coverage of IYCF-E programmes?	7
When use of infant formula is necessary what are the pros and cons, e.g., safety, timeliness, and cost-effectiveness of distribution of ready-to-use infant formula compared to distribution of powdered infant formula plus kit for safer use of breastmilk substitutes, on nutritional status and morbidity?	8
How to calculate, e.g., by mathematical modelling, the impact of specific IYCF-E programmes on nutritional status, morbidity, and mortality?	9
How to effectively link and mainstream IYCF-E interventions with other sectors such as health, WASH, food security and child protection?	10

It has been six years since it was published, humanitarian emergencies have continued to increase[57]. The COVID-19 pandemic, mounting effects of climate change, and continued political conflicts pose the most significant challenges to the sector[57], and therefore its ability

to generate evidence. The pandemic reversed progress by limiting people's access to healthcare and placing additional strain on healthcare services. In areas serviced by the humanitarian sector, antenatal care visits have decreased by 43%[16]. Currently, up to 43 countries experience famine-like conditions[16], which continued climate change is likely to exacerbate, pushing more people into food insecurity. Protracted conflicts across the Middle East and North, West and Central Africa continue, increasing the burden on the sector and requiring organisations to enter areas that are unsafe to access[16]. Wherever there are adults experiencing crises, there are infants and young children being affected too. Evidently, there are challenges both in researching and implementing interventions in IYCF-E.

1.5. Critical gaps between unmet need for knowledge and evidence-based practice in IYCF-E

Although various published guidelines[7,23,31–34] on IYCF-E exist, there remains a lack of evidence behind the prescribed interventions. Yet, as highlighted, it is critical that interventions involving infants and young children are evidence-based. Pearson and Jordan[58] developed a framework illustrating the gaps, and in doing so the different types of evidence needed, in the process of evidence generation and translation of health-related research into implementation. These include the gap between an unmet need for knowledge and discovery, which relates to descriptive or epidemiological studies that describe the extent and severity of the problem (gap one). Following this, it speaks to the gap between discovery and evaluation, which relates to evidence on what programmes work (gap two). Lastly, the gap between evaluation and implementation or policy action, which relates to evidence on how to increase uptake of an intervention already known to be effective and translated into policy (gap three). Figure 2 shows an adapted version of this framework[58]. Pearson and Jordan[58] assert that the presence of these gaps, or lack of evidence, can hinder the process of evidence-based practice, and consequently, health outcomes. Framing the lack of evidence in IYCF-E in this regard can help to organise and clarify where research should be targeted going forward.

Figure 2: Evidence gaps in knowledge translation, an adaption of Pearson and Jordan's framework[58]

1.6. Rationale

Given the continual paucity of research conducted in IYCF-E and the changes in context, particularly the COVID-19 pandemic and climate change, that have taken place since Prudhon et al.'s[1] list of priorities was published; it is now necessary to provide an update on the current, most relevant research priorities. Qualitative methods will allow this study to identify which of these priorities remain unanswered and, additionally, which have been addressed, but practitioners and policymakers do not perceive this to be the case due to a lack of evidence translation. In doing so, these researchers, policymakers, and practitioners' perceptions will help determine where the gaps lie in translating evidence into practice and the possible reasons for it. To the best of my knowledge, no qualitative study has investigated this in IYCF-E before. Additionally, this study will further add to the body of evidence on how Jordan and Pearson's[58] critical gaps can be applied to evidence-based practice, specifically in a global health matter such as IYCF-E. Its findings will provide researchers with insight into what research priorities in IYCF-E are relevant and essential to practitioners. It will also provide a basis for advocacy for practitioners and organisations working in IYCF-E to ensure that research is conducted on the most critical topics.

2. Aims and objectives

Aim:

This study aims to determine the extent to which the ten research priorities, as proposed by Prudhon et al.[1], of infant and young child feeding in humanitarian emergencies have been realised.

Objectives:

1. Using Prudhon et al.'s[1] ten research priorities, explore the perceptions of those working in IYCF-E on current research and gaps in knowledge on the topic and compare this against the current state of the evidence

2. Explore and contrast the perceptions of different stakeholders working in IYCF-E on why some research priorities may have been answered while others remain unanswered

3. Determine the perceptions of the relevance of Prudhon et al.'s[1] ten research priorities and whether there are additional priorities to consider

3. Methods

3.1. Research team and reflexivity

3.1.1 Personal characteristics

I, the author and investigator, am the only researcher of this study. I am a registered dietitian, studying Master of Science (MSc) in Nutrition for Global Health at the London School of Hygiene and Tropical Medicine (LSHTM). I have limited experience in qualitative methodologies. However, through my work, I have counselled many individuals, providing me with the skills, such as engaged listening, to explore participants' experiences and perspectives. I managed a child health organisation in an informal settlement where much of my work involved supporting IYCF in an emergency-like setting. I reviewed the qualitative methodologies module at LSHTM and received advice from my internal supervisor.

3.1.2 Relationship with participants

All interaction with participants was limited to recruitment-related correspondence. No prior relationships influenced the participants' responses and my interpretation of them. I notified participants that this was in fulfilment of my MSc and my prior work had driven my interest on the topic. Since I have programmatic experience in a similar field, I remained cognisant of how this may influence the responses of the participants and my analysis of the results and maintained a study journal to monitor my decision-making process.

3.2 Study design

This study makes use of a qualitative design. This provided the means for an in-depth exploration of stakeholders' perspectives and experiences. Reporting was guided by the Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist (Appendix 7)[59].

3.2.1 Theoretical frameworks

Pearson and Jordan's[58] framework (Figure 2) highlighting the types of evidence required in knowledge translation helped guide the study's aim, objectives, topic guide, and the interpretation and presentation of the results. I used thematic content analysis[60,61] to provide structure to the organisation of the data and to underpin the methodology in identifying themes.

3.2.2 Participant selection

Sampling and method of approach

I recruited participants through three pathways by means of purposive (ten participants) and snowball sampling (three participants). Firstly, through their position at the Emergency Nutrition Network, the researcher's external supervisor identified potential participants and shared their details; nine were recruited this way. Secondly, I searched LinkedIn for others working in IYCF-E, which resulted in an additional participant. Thirdly, to use the existing participants' networks, I selected the remaining three through snowball sampling. A purposive sampling method allowed for the selection of participants based on what would best inform the study's objectives[62], in this case with heterogenous work and research experience in IYCF-E. A snowball sampling approach meant that participants could suggest any other experts in their field. All participants had to speak English and have over five years of work experience in IYCF-E. I invited participants to participate via email (Appendix 2) with an attached information sheet (Appendix 3) and consent form (Appendix 4). Participants confirmed their willingness to participate by returning the signed consent. Following this, I sent possible interview times to them along with Prudhon et al.'s[1] research priorities. This allowed the participants to familiarise themselves with them.

Sample size

It is suggested that thematic saturation in qualitative research, where interviews generate no new ideas or themes, may be reached by 12 participants[63]. I transcribed the interviews and coded them shortly after they took place to monitor this. Through this process, I determined that a sample size of 13 allowed for thematic saturation while still being small enough to ensure a detailed analysis of each interview within the time constraints.

Non-participation

Four people who were invited to participate refused, reason being they were unavailable during the interviews' time frame. Another six did not respond to the invitation. No participants dropped out.

3.2.3 Setting

Setting of data collection and presence of non-participants

To allow for the inclusion of participants living in different countries, interviews were carried out on the video conferencing software, Zoom (*v5.10.4)*, from my residence in London, United Kingdom. Participants were able to interview in their chosen venue, which may have helped them feel more comfortable. I conducted the interviews according to the participants' schedules. During the interviews, no one was present apart from myself and the participants.

Description of sample

I interviewed 13 participants of varying ages and genders from a mix of research, policy, and programmatic backgrounds in IYCF-E. To best fulfil its aim and objectives, this study required a variety of stakeholders working in IYCF-E. Participants needed to have a minimum of five years' work experience to help ensure they would be equipped to speak on the research priorities.

3.2.4 Data collection

Interview guide, repeat interviews, audio/visual recording, and field notes

Before commencement, I designed an interview guide (Appendix 5) and used it for a pilot interview with two peers from LSHTM. Due to time constraints, no follow-up interviews were conducted. The interviews' audio was recorded and transcribed verbatim by Zoom software. Following the interview, I checked the transcript for accuracy. I maintained field notes during and after each interview and referred to them during analysis.

Duration, data saturation and returning of transcripts

Data collection took place between 11 July and 5 August 2022, with each interview lasting between 45 and 60 minutes. Data saturation was reached as no new information was gained from new participants. Transcripts were returned to participants for validation; however, none were returned with corrections.

Data collection process

Before each interview, I ensured adequate internet connection to avoid interruption. At the start, I greeted the participant and reminded of the study's aim and objectives. I explicitly stated that any information shared would be kept anonymous and that the interview would be recorded, but that it would be deleted once transcribed. The participant was allowed to ask questions, after which the recording was initiated. The interview guide structured the

interviews, but the semi-structured nature allowed me and the participants to deviate, allowing the conversation to flow more naturally.

3.3 Data analysis

Number of data coders, software, coding tree, participant checking

I, the sole coder, coded the data using NVivo 12 (*v12.7.0*) software. I did not present the codes in the form of a coding tree; however, the codebook (Appendix 6) provides clarity on the codes used. Due to the limited time frame, I did not ask the participants for feedback on the findings.

Analysis method

Thematic analysis has five stages, as detailed by Clarke and Braun[60]:

1. Familiarisation and transcription

   The researcher read through the transcripts twice before starting with coding. The first time was done while listening to the audio recording to correct errors in the transcript. The second was to become more familiar with the data. After reading each transcript, brief notes of possible significant findings were made for later reference.

2. Generating initial codes

   The researcher imported the interviews into NVivo 12 for analysis. Considering the specific nature of this study's aim and objectives, most codes were generated deductively per Prudhon et al.'s[1] priorities. However, the semi-structured interview format meant that some data was coded inductively. Data was initially coded with some of the surrounding data to retain the context. Some data was coded more than once as they related to multiple topics.

3. Searching for themes

   Once all the data had initial codes, they were organised into potential themes. In Nvivo, the researcher classified overarching themes as 'top-nodes' and collated all the initial codes under the relevant theme. These themes were then disaggregated into sub-themes. Notes made during the familiarisation stage helped identify these sub-themes.

4. Reviewing themes

   Once themes and sub-themes were identified, they were refined. This was an iterative process; the researcher first reviewed and refined the codes ensuring the extracts followed a coherent pattern.

5. <u>Defining and naming themes</u>

   In the last stage, the themes were given a final name. The themes and sub-themes were reviewed for the last time with the whole data set, ensuring they accurately portrayed the findings.

3.4 Ethics

Before proceeding with the recruitment of participants, I applied for ethical approval (Appendix 8). I obtained this from LSHTM Ethics Office (Ref: 26757) on 6 July 2022 (Appendix 1). Interview recordings were kept on a password-encrypted device that only I could access. Once I had checked the interview transcription for errors, the audio and video recording were permanently deleted. Each participant was allocated a number between 1 and 13, and I removed all identifying information from the transcripts. Once the study was completed, I permanently deleted all data from my device. My internal supervisor stored a copy of the NVivo data file on LSHTM Compass.

4 Results

4.1. Participant characteristics

Thirteen participants were recruited for the study. As per the intended sample, all participants had extensive experience in IYCF-E, with the majority having a background in programming and policy and fewer in research. Four participants reported that they had a mix of experience in IYCF-E. All but two had some programmatic experience, and most were women. Participant characteristics are summarised in Table 2.

Table 2: Participant characteristics

Participant (P)	Sex	Experience (years)	Experience within IYCF-E
1	Male	13	Programmatic
2	Female	15	Programmatic and research
3	Female	12	Programmatic and policy
4	Female	13	Programmatic
5	Female	6	Policy
6	Female	22	Programmatic
7	Female	8	Programmatic
8	Female	12	Programmatic, policy and research
9	Female	16	Research
10	Female	20	Programmatic
11	Female	25	Programmatic and research
12	Male	19	Programmatic
13	Female	15	Programmatic

As per the thematic analysis, the results are organised by overarching themes:

1. General views on the lack of IYCF-E research
2. Views on each of Prudhon et al.'s[1] ten research priorities in IYCF-E
3. Additional priorities in IYCF-E to consider

A codebook was produced using NVivo (Appendix 6).

4.1 Views on the lack of research in IYCF-E

4.1.1 Irregular, sparse, and poor-quality evidence

Participants spoke of the lack of research in IYCF-E and how infrequently it gets published. Some participants expressed concern over continually needing to cite literature published decades ago and how even recent studies were based on historic emergencies.

> *"When I'm writing papers now, I'm still citing research that's from the 80s and … 90s. … I guess the fundamental bit of research on why it* [IYCF-E] *matters … is, from flooding that happened in Botswana in 2005 or 6, …, I've just been writing a presentation the last couple of days … And I'm aware that I'm citing research, sometimes that's 20 years old." – P9*

Two participants commented that the IYCF-E operational guidance was based on consensus instead of being evidence-based. Although they felt confident in using the operational guidance, they thought it did not aid in building confidence in IYCF-E interventions among those not working in the sector.

> *"And again, … it's an easy way out to justify what we're doing, consensus. But when anyone, if you ask any one of us 'can you show me the data?', even the programmatic data, not just not the evidence … We barely have it. And I'm not doubting what we're doing works. But we don't have, it we really don't." – P1*

Participants postulated that this lack of good quality evidence then negatively influenced the importance that other people placed on IYCF-E and how much money was invested in it.

> *"We don't have evidence to show that these interventions have the outcomes that we say they do. And that really hampers us in advocacy, like it really, really, really hampers us."- P9*

Almost half of the participants specifically mentioned the lack of impact evaluations in IYCF-E and that this represented a substantial gap in the evidence. These participants were not limited to a particular background and included those in research, programming, and policy.

> "*I just find there's not enough impact evaluations, and there are so many paths that lead to the impact and so much is focused on input, output, and outcome, not impact. And I think that's a huge gap." – P3*

4.1.2 Lack of funding and the willingness to use available data

When asked why they thought there was such a limited evidence base for IYCF-E, a quarter of the participants noted a lack of funding available to conduct research in the humanitarian sector.

> *"But the bottom line is always the bottom line. … It's hard to mobilise resources dedicated to research in humanitarian context."- P1*

In addition to the lack of resources available for IYCF-E research, participants mentioned that there are challenges in capturing data in emergency settings and that there is a lack of motivation to build capacity in the monitoring and evaluating of IYCF-E data.

"I don't think the monitoring and evaluation portfolio for IYCF-E is straightforward. I think many find that challenging … I find that also compared to other areas of response, WASH [water, sanitation and hygiene], *food security, protection, education, building capacity for IYCF-E monitoring and evaluation is really important. And it's not that widespread."- P4*

In contrast, another participant, a researcher, suggested that the data needed for IYCF-E research may be being collected, however, it was not being used to generate research. It was noted that this could be due to time constraints or a lack of willingness.

"But … there's not great investment into it. I mean, I think, we have difficulty that a lot of organisations actually do a lot of data collection as part of their work. But it doesn't necessarily make its way into the peer-reviewed literature."- P9

4.1.3 Greater interest in acute malnutrition

Some participants drew comparisons between investment and research in acute malnutrition and IYCF-E. They highlighted that acute malnutrition has received greater interest in the past and that this has limited the funding available for IYCF-E interventions and its research.

"And it tends to be quite often that you'll only get nutrition funding, if there's wasting [acute malnutrition] *… But it's still a battle to get people to see that this is still an important life intervention."- P7*

One participant noted that this may be due to innovation in the design of the treatment of acute malnutrition and that this was drawing interest into that work. However, they also noted that this is lacking in the IYCF-E field.

4.3 Views on each of Prudhon et al.'s[1] ten research priorities in IYCF-E

The research priorities have been listed in order of priority according to the responses of the participants of this study and the research priorities' titles have been paraphrased.

4.3.1 The effectiveness and cost-effectiveness of complementary feeding interventions

Out of all ten priorities, this was one of the two most spoken about as a main priority. This was consistent across participants from research, policy, and practitioner background. Most participants felt that this research priority had been partly answered, owing to the fact that it encompasses multiple interventions. However, they felt that there was still a lack of evidence

looking at the various interventions comparatively and IYCF-E outcomes. No participants explicitly stated that this was no longer a priority or that it had been answered entirely.

> *"I think this one is a huge priority, honestly, in terms of what works, what doesn't work, what is the package of interventions to support complementary feeding in emergencies… I think we're not there yet, in terms of what works best, what is the package, and in which context to use it."- P8*

More than half of the participants who spoke about this priority expressed how complementary feeding interventions had been previously neglected in IYCF-E research compared to breastfeeding. However, most of these participants said this was changing, and there was greater interest in it now.

> *"I know that I push a lot now, … on complementary feeding, because I think that's been a neglected part of infant and young child feeding or nutrition in emergency contexts, especially. There's… a strong focus,… people who are primarily focused on breastfeeding."-P3*

> *"So I think complementary feeding has been quite marginalised in the IYCF-E space… I think the focus really was on breastfeeding and formula feeding because it was so obviously urgent."- P9*

One participant from a research background indicated that a reason for this shift could be, in part, that there is more evidence available on breastfeeding now. Hence, it allows for a greater focus to be placed on research in complementary feeding. Other participants, both with programmatic experience, felt that despite this shift, there remained challenges in researching complementary feeding interventions in emergency settings because it falls under multiple sectors.

> *"So really, … we need different … sectors to be coming together to agree like the area of complementary feeding, which obviously deals with food, but also deals with nutrition also deals with behaviour change that those … people need to come together and agree that we want to do research on this area."- P6*

There were heterogeneous answers about in which context this research would be most helpful. One participant stated that the focus should be on areas with less acute malnutrition since this had been prioritised previously; however, another said that areas with high rates of

stunting or wasting should be prioritised. Two participants expressed that although low-income settings are important, research in middle- and high-income countries should not be neglected.

> *"Like, obviously, low- and middle-income countries. Yes. We need more evidence for there too. But …I think … high- [and] middle-income is also a big gap. And it's probably emerged, maybe since this review was published, … as an even greater priority."- P6*

4.3.2 Safe supply of breastmilk substitutes

Of the ten participants who reported being knowledgeable about this priority, seven stated that it remains one of the most critical priorities on the list. These participants were from policy, programmatic and research backgrounds. Most of these participants felt that this priority was at least partly answered, however, more research is required.

> *"I think the ones related to the breastmilk substitutes … whether it was the cash transfer, the timeliness, the distribution, although we have a lot, but we need to look at different contexts and what works where."- P4*

Six participants mentioned what they perceived the reasons for this lack of evidence to be. One felt that it was due to the difficultly in gaining ethical approval for research to be conducted. Another two thought it was due to a lack of opportunity and appropriate setting to study it. Three felt that there might be hesitancy in implementing and researching breastmilk substitutes interventions because it has not been done regularly before.

> *"I think people have been scared of breastmilk substitutes, and … it's difficult to do, breastmilk substitute programming is hard. And people have tended to shy away from it. And not wanted to. Yeah, they just wanted to shy away from it."- P9*

Interestingly, four participants stated that they felt the Ukraine crisis might offer an opportunity to study this further as it is a setting where breastfeeding rates are low, and the use of breastmilk substitutes is high.

> *"I think that with the new kinds of emergencies that have emerged and the context where you have … a number of non-breastfed infants or infants dependent on infant formula has triggered, you know, … and Ukraine for example, … a trigger in itself."- P8*

4.3.3 The extent that cash transfers are used to purchase breastmilk substitutes

Of the ten participants who reported being knowledgeable on this topic, none reported it as sufficiently answered. Despite this, some of these participants felt the priority as it currently stands, would not provide useful information.

> *"So that one, what's the relevance to that? How is that information going to be used?… I think that needs to be more of a wider research priority"- P3*

All ten participants from a range of experience in IYCF-E stated that it remained a priority. However, all but two said that it could be made more meaningful if combined with research priority four on breastmilk substitutes.

> *"I don't think it should be by itself, I think that it should be combined with the artificial feeding support interventions or supporting the non-breastfed. Yeah, so I feel that needs to be combined with artificial feeding."- P8*

Two participants expressed their thoughts on the reason for the lack of evidence. One suggested that the data may already be being collected during post-distribution of cash transfers, however, no one had put it into research. Another suggested that there could be hesitancy or fear over the repercussions if cash transfers were used for breastmilk substitutes; therefore, it was not being done or studied.

4.3.4 The design, effectiveness, and cost-effectiveness of re-lactation interventions

Five of the nine participants who spoke about this research priority felt that there is likely practical knowledge and guidance available, however, some mentioned that it is not easy to source, and there remains a lack of evidence on the impact and effectiveness of the interventions

> *"I think that there's a growing group of practitioners with knowledge around designing re-lactation …I don't think that we actually have a sense of what that means and what it looks like around the globe in an emergency context. If I want to go look to see… in the last 10 years what are the major re-lactation interventions or programmatic or projects that have taken place around the globe. Like, there's no place for me to find that I have to really dig and look for it. And yet, and yet, I know it happens."- P5*

All nine participants said that it remains a research priority in IYCF-E. Some said that having more evidence in this research priority would help to build confidence in its use in emergency settings.

> *"I think there's still a great deal of lack of confidence in re-lactation. And so there's not very many places, not very many instances where there's any sort of systematic kind of programming around re-lactation. So, yeah, we definitely need more research to help people to be confident."- P9*

4.3.5 Provision of effective psychological support to caretakers

Nine participants mentioned they were knowledgeable or experienced on this topic. Eight of these agreed that this remained a priority, citing that a caregiver's psychological state can influence their ability to care for their child and could impact their choice of breastfeeding or using breastmilk substitutes.

> *"I think, particularly how to support those mothers and caregivers, who are distressed, who feel that they need infant formula. But in fact … they're not eligible or … really what they're needing is breastfeeding support, how to best support them, I think is difficult. And we don't really have a lot of evidence around it." -P 9*

The one participant who stated it was no longer a priority did not dispute the importance of providing psychological support to caregivers but reasoned that there was sufficient guidance on how to provide it. This echoed many participants' sentiments that there was a lot of operational guidance on providing this care, however, there was little evidence supporting what is most effective.

> *"There's been a lot done on this, but it doesn't feel systematic. From a research standpoint, there's a lot of learning. And there are a lot of case studies, and there are a lot of tools. But I don't know that there's been any study to my knowledge that's really looked at comparing two different approaches to see what's more effective. .... It's such a detriment when it comes to feeding practices. And so I really see that as being … more of a priority to me." – P2*

4.3.6 The long-term effect of IYCF-E interventions on IYCF practices

Eight of the ten participants that spoke of this topic said that studying the long-term effects of IYCF-E interventions was not a priority. They all mentioned that it is more important to study

the impact of these interventions in the acute or short-term and that we are not yet at the stage of studying the long-term impact.

> *"We absolutely are in desperate need of evidence that the interventions that we have in the operational guidance are effective and helpful. So rather, right now, as opposed to looking to the long term just yet."- P9*

Three of these participants spoke to the challenges of monitoring IYCF outcomes in emergencies in the long term. Two mentioned that there was never funding available after an emergency to conduct such research, and another noted that only particular crises would lend themselves to this as displaced people may move, making it difficult to follow up with them over time.

4.3.7 Determining the number beneficiaries and coverage of IYCF-E programmes

Of the nine participants who shared their thoughts on this priority, all felt that there were tools or methods available to calculate this and that it was no longer a research priority.

> *"But I think that again … we did have a suggested, sort of, how to and who to prioritise … so I'd say we are more or less there."- P8*

4.3.8 Ready-to-use versus powdered infant formula

Eight of the eleven participants who spoke of this topic stated that this topic is not a current priority. Most participants said that there is information available, particularly on the pros and cons, of using ready-to-use versus powdered infant formula, however, the decision of which to use would be context-specific and driven by what was available at the time. Therefore, they felt that this topic did not require further research.

> *"We know a lot of the safety and time and the cost-effectiveness, ultimately, we know that ready-to-use infant formula is prohibitively expensive so … that's more context-dictated as opposed to … some kind of trial... Even if the evidence shows you that, we can always use powdered breastmilk substitutes … or powdered infant formula. You never know what's going to happen. Like there could be a natural disaster that compromises the water system. So … I don't know that that's something that we need more."- P2*

4.3.9 Calculating the impact of specific IYCF-E programmes

Although this was the least mentioned priority, all four participants, from a mix of research and programmatic backgrounds, said that it was still a priority. They felt that it provides vital information for advocacy, particularly when approaching donors.

> *"It's important in terms of the evidence around the importance of our IYCF-E programmes, because we need it for the advocacy, we need to continue raising the profile of IYCF-E programmes and investment".- P8*

4.3.10 Effectively link and mainstream IYCF-E interventions with other sectors

Ten participants spoke about this topic; all affirmed that it remains a research priority in IYCF-E. Many participants felt that progress had been made since the list of priorities had been published and that there were multiple sources of guidance on how to go about it. However, as with the priority of providing psychological support to caregivers, participants noted a lack of evidence on its impact.

> *"We have the UNHCR framework, I think it is a great framework to tell us what to do. I don't think we've necessarily researched it to say… is this effective? Like, have we done this effectively? … I know there's some of the grey literature out there … case studies …. But I think there's definitely more to be done for sure." -P6*

Participants highlighted the challenges in researching this. These included the complexity of the topic as it would require multiple sectors in the emergency response to participate. Another challenge that was noted was the difficulty in finding a genuinely integrated IYCF-E intervention to study.

> *"I think intersectoral work in general is very difficult. It's under-resourced. … We still are dependent on siloed funding opportunities. And so … it takes real intentionality. And even to find a programme. So often your research dollars are separate from your programmatic dollars so sometimes you have research money, and you're looking for a programme that would allow you to look at this question…I think finding good examples of IYCF-E interventions integrated well is a challenge, and then to be able to construct a study around that..."- P6*

4.3.11 Summary of findings in relation to Pearson and Jordan's[58] critical gaps in evidence

In general, participants repeatedly mentioned the lack of evidence showing impact and effectiveness of IYCF-E interventions. There were no priorities that participants' opinions resulted in an inconclusive interpretation; either all or a clear majority of participants agreed. I mapped the research priorities that participants perceive to still be a priority onto the framework in Figure 3 below. The priorities deemed to be irrelevant were the long-term effects of IYCF-E interventions, ready-to-use versus powdered infant formula, and determining the number of beneficiaries and coverage of IYCF-E programmes. The remaining priorities were considered unanswered yet still relevant and requiring further evidence by most participants.

Discovery

The priorities related to the extent that cash transfers are used to purchase breastmilk substitutes and how to calculate the impact of IYCF-E programmes can be classified as providing evidence, if answered, for gap one. Evidence generated for these research priorities will aid in describing the extent or severity of the specified problems.

Evaluation

The priorities related to the effectiveness and cost-effectiveness of complementary feeding interventions, the effectiveness of re-lactation interventions, providing effective psychological support, calculating the impact of IYCF-E programmes, and linking IYCF-E with other sectors can be classified as providing evidence for gap two. Evidence generated for these research priorities aid in identifying what interventions work and in which settings.

Implementation science of routine programmes and policy

The priorities related to the effectiveness and cost-effectiveness of complementary feeding interventions and safe mechanisms for supplying breastmilk substitutes can be classified as providing evidence for gap three. Evidence generated for these research priorities will assist in determining how these interventions can be best implemented and therefore translated into routine practice and policy.

Mapping the research priorities onto Pearson and Jordan's framework[58] gives a visual indication of what participants viewed as still a priority. The presence of these potential evidence gaps, as mentioned earlier, could be limiting evidence-based implementation of interventions, and consequent health outcomes in infants and young children in emergencies.

Key			
1	Extent that cash transfers are used to purchase breastmilk substitutes	6	Effective provision of psychological support
2	Effectiveness/cost-effectiveness of complementary feeding interventions	7	Determining number of beneficiaries & coverage
3	Long term effect IYCF-E interventions	8	Pros & cons of ready-to-use versus powdered infant formula
4	Safe mechanism for supplying BMS	9	Calculating impact of IYCF-E programmes
5	Design & effectiveness of re-lactation interventions	10	Effectively linking IYCF-E programmes with other sectors

Figure 3: Research priorities classified by type of evidence required for knowledge translation, an adaption of Pearson and Jordan's framework[58]

4.4 Additional research priorities to consider in IYCF-E

Participants made various suggestions for additional research priorities that should be considered. These were heterogeneous. Two participants spoke of the role that gender norms play in IYCF-E; one felt that men's involvement in IYCF-E should be researched, while another suggested women's empowerment and its impact on IYCF-E practices. Another two participants mentioned that IYCF-E interventions should be looked at together with other aspects of child health, such as developmental milestones and child play. While others spoke of investigating the feasibility of integrating IYCF-E interventions into existing health systems and exploring the best time points for providing IYCF counselling.

5 Discussion

Despite the role that poor feeding practices play in increasing mortality and morbidity risk in infants and young children in emergencies, there remains a dearth of evidence on the subject. To counter this, Prudhon et al.[1] published a list of research priorities in IYCF-E. Now, this study set out to explore the perceptions of experts in IYCF-E as to which of these research priorities remain relevant and unanswered. Additionally, to determine whether there is alignment between the state of the evidence on IYCF-E and the perceived state of the evidence to conclude whether gaps exist within the evidence itself or in the translation of that evidence into practice.

Participants commonly referenced the lack of evidence in IYCF-E, noting reasons such as a lack of funding, challenges in data collection, a greater interest in acute malnutrition over IYCF-E research, and ethical concerns in researching breastmilk substitutes for risk of compromising breastfeeding. In accordance with this and since only six years have passed since Prudhon et al.[1] published their list, participants generally deemed that most of the research priorities remain unanswered. The priorities concerning the effectiveness of complementary feeding interventions, and concerning safe mechanisms of supplying breastmilk substitutes, were regarded as the most pressing. Only those relating to long-term effects of IYCF-E interventions, calculating the coverage of programmes, and ready-to-use versus powdered infant formula were considered as no longer relevant. In general, there were no notable differences in opinion between participants with research, programmatic or policy experience in IYCF-E.

5.1. Views on the lack of IYCF-E research

Participants from all backgrounds consistently mentioned the lack of evidence available on IYCF-E. Although there seems to be no other qualitative literature exploring experts' perceptions on this subject, apart from Prudhon et al.[1], this lack has been highlighted in various systematic and scoping reviews[35,36,38,39]. Notably, the most recent Humanitarian Health Evidence Review[38] identified only four articles focusing on IYCF-E published between 2013 and 2021, while 13 were on wasting. This comparison shows agreement with participants' views that acute malnutrition has received greater interest previously. Participants commonly spoke of the need for evidence on the effectiveness across the scope of interventions in IYCF-E, an evidence map of reviews drew similar conclusions[36]. Although the authors of this review drew their conclusions from examining the available evidence, this qualitative study provides valuable confirmation of this need by speaking to experts in IYCF-E who generate and use this research. This similarity indicates alignment between the state of the evidence and the participants' perceptions of the evidence. The challenges the participants identified in conducting research in humanitarian emergencies, specifically the lack of funding and willingness to use available data to generate peer-reviewed literature, are consistent with those identified in other reviews[55,64]. It is apparent that these difficulties persist across the sector.

5.2. Views on each of Prudhon et al.'s[1] ten research priorities in IYCF-E

The perceptions of unanswered priorities noted in this study are very similar to the evidence gaps identified in the most recent Humanitarian Health Evidence Review[38]. Again, indicating alignment between perceptions of evidence and the state of the evidence. This may be, in

part, due to the presence of clear communication channels in IYCF-E when evidence is published, but also partly because there is such little evidence published on the topic that it is quickly learned about.

The exception to the similarities between this review's[38] findings and this study was that the review highlighted gaps in interventions for breastfeeding and nutrition education, which were not specifically on Prudhon et al.'s[1] list, nor were they identified by participants as other priorities to consider. In contrast to the review's[38] conclusions on the gap in breastfeeding evidence, participants explicitly stated that research into complementary feeding interventions required greater focus because they felt that breastfeeding in IYCF-E had been prioritised previously. The review[38] was conducted systematically, however it focused solely on humanitarian emergencies in low- and middle-income settings and did not include any grey literature or any studies published prior to 2013. Since much of the evidence in IYCF-E that is referenced in peer-reviewed articles is dated[26,27,65] or is only published in grey literature, the participants of this qualitative study may have been considering grey literature or evidence published prior to 2013, indicating why this qualitative study found different results. Although the Infant Feeding in Emergencies operational guidance indicates the different options for supporting complementary feeding[7], there remains a lack of evidence comparing the interventions' effectiveness and impact on IYCF practices. Although, ultimately, the decision of which intervention to choose in an emergency setting will be context-specific and dependent on the availability of resources and the capacity of the organisation supplying them. The participants in this study emphasised the necessity of having the evidence to make this decision.

In addition to complementary feeding, the priority on designing safe breastmilk substitutes interventions in settings where breastmilk substitutes use is high and breastfeeding rates are low was consistently mentioned as a priority above the others. None of the previously mentioned reviews highlighted this gap or the need for evidence, nor did they specify any literature relating to this topic. This may be because this need has only become recognised as a need more recently, indicating alignment between the state of the evidence, or lack thereof, and perceptions of participants on the evidence. It has been noted that breastmilk substitutes have been extensively distributed in a harmful and unsolicited manner[5,22,23,66] in emergencies in the past. Therefore, practitioners' focus had been on preventing this and not necessarily on how to safely provide breastmilk substitutes. UNICEF recently released guidance on the supply of breastmilk substitutes in emergencies[45]. Although this goes some way in providing practitioners with guidance, participants highlighted the growing concern that more situations may arise where this is needed and that they would like to see further evidence

on how this has been done in different contexts. This extensive gap relates specifically to how best to implement the safe provision of breastmilk substitutes without compromising breastfeeding, with an expressed need of evidence in middle- and high-income countries.

Most participants noted that the priority on the extent that cash transfers are used to purchase breastmilk substitutes remains relevant and is unanswered. Since Prudhon et al.[1] published, there has been studies evaluating cash transfers to improve nutritional status and dietary diversity, and reduce the risk of acute malnutrition[47–49]. However, none of these referred to breastmilk substitutes. This may be due, as participants noted, to hesitancy to appearing to support breastmilk substitutes. Although participants did not view this as one of the most pressing priorities, future evaluations of cash transfer programmes may want to consider including this as an outcome, particularly as more emergencies occur in different contexts where there may be high breastmilk substitute use and low breastfeeding rates.

Participants felt that the priority on the design and effectiveness of re-lactation interventions, remains an unanswered priority. They emphasised that there may be growing institutional knowledge whereby some practitioners working in IYCF-E know how to support re-lactation, however, there was a lack of “formal” or peer-reviewed evidence on the effectiveness of such interventions. Again, re-lactation was not discussed in any of the reviews. In accordance with this study’s findings, a recent scoping review on re-lactation methods and facilitators acknowledged this lack of evidence as its authors were required to rely on case studies and a limited evidence base[67]. However, none of the articles included in this review were conducted in emergencies, which hinders the external validity of these results to such settings. Further evidence of the effectiveness of the various prescribed re-lactation interventions in emergencies may provide greater confidence and use of the techniques.

Participants regarded the priority concerning providing effective psychological support to caregivers, as having been partly answered since Prudhon et al.[1] was published. Specifically, they identified that there was operational guidance on providing psychological care but a lack of evidence on the efficacy of this care in practice. Indeed, various guidelines[31,68,69] have been published on this since 2016 that specifically reference the needs of children’s caregivers. In agreement with the participants’ views, an evidence map concluded that no reviews evaluating the evidence of providing effective support to caregivers had been published between 2000 and 2016[36]. A literature search found that this is still the case. In general, evidence of the efficacy of providing psychological care to adults in emergencies, whether caregivers or not, is limited. A systematic review and a meta-analysis showed results in favour of mental health and psychosocial support programmes in adults in humanitarian emergencies[70,71], however,

they did not specifically refer to adults in the role of caregivers or the resulting impacts on IYCF outcomes. Caregivers of children may face additional or different burdens therefore, similar evidence specific to caregivers would aid in answering this priority.

The priority concerning calculating impact of IYCF-E programmes was spoken of the least. Those that did speak of it noted the importance of having it answered and prioritised so that the evidence generated by these methods could be used to advocate for IYCF-E. Most participants were practitioners, and this priority relates to the means to calculate impact, which may be why so few felt experienced enough to talk about it. This has not been emphasised in previous reviews, as they have been focused on gaps in the evidence and not on methodologies in creating the evidence. Two tools that relate to this priority that have been created since Prudhon et al.[1] published include The Cost of Not Breastfeeding tool[72], allowing for the determination of economic losses related to not breastfeeding, and the Humanitarian Lives Saved Approach[73], a methodology to determine which interventions are most effective in humanitarian settings. This discrepancy between the existence of tools and perceptions of participants indicates that there could be poor translation of evidence on this priority, highlighting that this priority has been addressed and that it is not the lack of evidence that presents a problem, but rather the communication of it.

Participants felt the priority relating to effectively integrating IYCF-E interventions into other sectors remains a priority. Since the research priorities were published in 2016, Save the Children and UNHCR have released a multi-sectoral framework detailing the linkage of IYCF-E with other sectors[52]. Although participants acknowledged the progress this served, they felt that more evidence could be generated on the effectiveness of applying this framework. Brief case studies are noted in the roll-out guide[74]. However, these do not acknowledge the barriers associated with multisectoral work and how to overcome them, arguably a key component of successful implementation. Another set of case studies noted the challenges associated with implementation such as the lack of staff interest in multi-sectoral work, lack of supportive policies, and a lack of specific reporting systems for the integrated activities[75]. Other studies on different multisectoral health interventions have noted additional potential barriers such as a lack of funding[76,77], ineffective mechanisms to share learnings across sectors[76], poor transdisciplinary awareness of activities[76], lack of staff motivation[77], and unclear staff responsibilities [77]. It is possible that these may influence the integration of IYCF-E into other sectors too. Further detailed evaluations on the implementation of this framework across different contexts are required.

Pearson and Jordan's[58] framework aids in outlining the different types of evidence that exist and are needed in IYCF-E (Figure 3). What is apparent is the clear lack of evidence, across most of Prudhon et al.'s[1] research priorities, showing the impact and effectiveness of IYCF-E interventions. Participants repeatedly expressed this, placing the greatest emphasis on the need for such evidence on complementary feeding interventions and safe mechanisms of supplying breastmilk substitutes without compromising breastfeeding. This indicates that research in IYCF-E should be focusing on the final part of the cycle (Figure 3) - the implementation science of getting interventions into routine programmes and policy. Evidence in this area would provide greater understanding into the most effective modes and contexts in which interventions should be implemented, the methods of implementing these effective interventions at scale within emergency contexts and the methods required to increase policy interest and stakeholder investment.

5.3. Additional research priorities to consider in IYCF

Participants' suggestions of additional priorities in IYCF-E were heterogeneous. However, some common themes were identified relating to the role of gender norms in shaping IYCF-E practices, how best to integrate IYCF-E into an existing health system, and the influence of maternal nutritional status on IYCF-E outcomes, amongst others. These gaps were not identified in previous reviews, however, they could provide areas for further research in the future.

5.4. Strengths and limitations

Strengths of this study include that it used qualitative methodology to determine the current priorities, which provided depth and understanding as to which topics remain a research priority and why the gaps exist in the evidence. Using semi-structured interviews and a combination of deductive and inductive coding allowed for themes outside the objectives to be identified. A study like this has not been done before, allowing it to generate novel findings in identifying reasons for gaps in the evidence. Participants had extensive experience in IYCF-E and came from a mix of backgrounds, giving authority to their answers and allowing for greater confidence in the findings. Conducting interviews on Zoom permitted the inclusion of participants working in different settings, allowing for a more diverse selection of participants. Most participants' answers agreed across the full breadth of topics discussed, allowing greater confidence in the interpretation of the results.

Limitations of the study include that participants self-reported areas of IYCF-E they are more knowledgeable. Due to social desirability bias, they may have reported on more or fewer areas

than they are familiar, which would influence the interpretation of whether participants' perception of the evidence matches the available evidence. The researcher tried to prevent this by allowing introductions before the recording started so that the participant would feel more comfortable sharing opinions. Whilst qualitative methods provided benefit, adding a component of ranking the research priorities as was done in Prudhon et al.'s[1] initial paper may have added additional value. No one else critically evaluated the coding; however, the researcher kept a study journal to ensure consistency in coding and interpreting the results. Further work could involve including another analyst or by sharing the findings with participants to ensure that they agree with the interpretation. There is the risk of selection bias as some participants were selected via snowball sampling, therefore their opinions may be like those who recommended them. To counter this, the researcher recruited participants via multiple pathways. Due to the limited sample size, the results of this study may not be generalisable to represent the views of all researchers, policymakers, and practitioners in IYCF-E. To mitigate this risk, the researcher continued to collect data until saturation was reached to represent better those working in the sector. Participants rarely had just one type of experience in IYCF-E, making it a challenge to contrast perceptions between them. However, this is likely unavoidable. Despite these limitations, the fact that data saturation was reached and that participants had extensive experience indicates high internal validity.

6 Conclusion

IYCF-E remains concerningly under-researched, with current priorities being the effectiveness of different complementary feeding interventions and mechanisms for safely supplying breastmilk substitutes while still protecting, promoting, and supporting breastfeeding. Of the ten research priorities, participants consistently found seven to still be relevant, and apart from methods for calculating the impact of IYCF-E interventions, which has been addressed, their perceptions of the evidence aligned with the state of the evidence. However, this is likely because there is so little evidence available. Reasons for the gaps are clear: emergency settings provide considerable challenges in conducting research ethically and is majorly underfunded. Case studies, grey literature and other operational research provide essential sources of guidance in IYCF-E; however, this study indicates how research now needs to be focussed on how to effectively implement the different prescribed interventions, to result in an uptake in routine programming, policy and stakeholder interest, and consequently better health outcomes for infant and young children in emergency settings.

7 Recommendations

1. Research should be focused on the effectiveness and implementation of different complementary feeding interventions and how to safely distribute breastmilk substitutes without compromising breastfeeding.
2. Following this, research should be focused on the effectiveness of re-lactation interventions and provision of psychological support for caregivers, and the integration of IYCF-E into other sectors.
3. Evidence, regardless of whether it is operational or academic, should be consolidated and made accessible among the IYCF-E community.

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9 Appendices

9.1 Ethics Approval

London School of Hygiene & Tropical Medicine
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MSc Research Ethics Committee

MSc Student
MSc Nutrition for Global Health
LSHTM
6 July 2022

Dear

Study Title: An update on the research priorities of infant and young child feeding in emergency settings: A qualitative study

LSHTM MSc Ethics Ref: 26757

Thank you for responding to the MSc Committee's request for further information on the above research and submitting revised documentation.
The further information has been considered by the RGIO on behalf of the committee.
Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application (CARE) form and supporting documentation as revised, subject to the conditions specified below.

Conditions of the favourable opinion
Approval is contingent on local ethical approval having been received, where relevant. It is the responsibility of the student and their supervisor to ensure appropriate local ethical approval is in place before a study commences (ie if you indicated this in the local approval section of the form). Please forward confirmation of local ethics approval as soon as it is received.

Approved documents
The final list of documents reviewed and approved by the Committee is as follows:

Document Type	File Name	Date	Version
Investigator CV	Curriculum Vitae_	29/03/2022	1
Other	Research_Ethics_online_training_certificate	29/03/2022	1
Information Sheet	Consent form for participant and representative	31/03/2022	1
Advertisements	Recruitment e-mail	31/03/2022	1
Information Sheet	Participant Information Sheet_Final	06/04/2022	1
Information Sheet	Topic guide_Final	06/04/2022	1
Protocol / Proposal	Topic guide_Final	21/04/2022	1
Covering Letter	Letter of clarification_	04/07/2022	1
Covering Letter	Letter of support - ENN_	04/07/2022	1
Information Sheet	Letter of support - ENN_	04/07/2022	1

After ethical review
Any subsequent changes to the application must be submitted to the Committee via an Amendment form on the ethics online applications website.
Ethics online applications website link: http://leo.lshtm.ac.uk
Yours sincerely,

P. Milligan

Professor Paul Milligan
Chair

9.2 Recruitment Email

Subject: Participation in an MSc study on updating the research priorities in infant and young child feeding in emergency settings

Dear XXX,

My name is [redacted], and I am a Master of Science student studying Nutrition for Global Health at the London School of Hygiene and Tropical Medicine (LSHTM).

I'd like to invite you to take part in my research study entitled: *An update on the research priorities in infant and young child feeding in emergency settings: A qualitative study.*

You have been identified, with the assistance of [redacted] at Emergency Nutrition Network, as a possible participant because of your work in infant and young child feeding in emergencies. Joining the study is completely up to you, before you decide I would like you to understand why the research is being done and what it would involve for you. I have attached an information sheet, which details the purpose of the study, and a consent form.

Participation will entail one single interview, lasting 45 to 60 minutes, in English via Zoom. I will provide you with a list of 10 research priorities in IYCF-E as determined in prior research. I will ask that you read through them briefly before the interview.

Should you agree to participate, I ask that you sign the consent form and return it to me at your earliest convenience. After this, I will forward you a Calendly link with available time slots to schedule the interview. I am flexible with dates and times, so if you would prefer a time that is not available on the link then please do not hesitate to contact me.

If you have any further questions, please contact me via email. I look forward to hearing back from you.

Many thanks and best wishes,

[redacted]
MSc Nutrition for Global Health candidate

9.3 Participant Information Sheet

Participant Information Sheet

Title of Project: *A update on research priorities in infant and young child feeding in emergencies: A qualitative study*

Introduction

I am a Master of Science student currently studying Nutrition for Global Health at the London School of Hygiene and Tropical Medicine (LSHTM). I would like to invite you to take part in a research study. Joining the study is entirely up to you. Before you decide, you need to understand why the research is being done and what it would involve. I will be available to answer any questions you may have. Ask questions if anything you read is not clear or if you would like more information. Please feel free to talk to others about the study if you wish. Take time to decide whether or not to take part.

What is the purpose of the study?

I am conducting this study to determine what the current research priorities are in infant and young child feeding in emergencies (IYCF-E). This is in the completion of my degree. I want to understand what different peoples' perceptions are of the current priorities and gaps in research in IYCF-E, using a predetermined list of 10 research priorities as set out by Prudhon et al (2016). I would also like to determine whether any progress has been made on previously published research priorities, whether these are still relevant, and whether there are any more that need to be added to the list. I will be contrasting the perceptions of researchers and practitioners in IYCF-E, to determine the reasons for any gaps in the evidence base.

Why have I been asked to take part?

You have been invited because you have been identified as someone who works, or who has worked, in the field of IYCF-E.

Do I have to take part?

No. It is up to you to decide to take part. If you don't want to take part, that's ok. If you agree to take part, I will ask that you sign the attached consent form and return it to me via email at your earliest convenience. We will discuss the study briefly before the interview and you will be given an opportunity to ask any clarifying questions. You may email me before the interview if you would like further information before signing the consent form.

What will happen to me if I take part?

You will complete one interview of 45 to 60 minutes from your home/work with the primary researcher ([redacted]) via Zoom. This interview will be recorded and transcribed so that it can be analysed. After which, the recording will be permanently deleted.

What will I have to do?

I will ask you to read over a list of ten research priorities in IYCF-E that have been identified in a previous research paper by Prudhon et al (2016). I will then ask you to answer a set of pre-prepared questions in a video interview with me on Zoom, which is a free to use conferencing software. This can be done from any private space with internet connection and should take no longer than one hour. If you are taking part, please download and familiarise yourself with Zoom if you have not done so already. Feel free to contact me should you require further information on the software.

What are the possible risks and disadvantages?

The interview questions are not expected to cause you any discomfort. However, if they do we can stop the interview at any point.

What are the possible benefits?

I cannot promise the study will help you but the information that I get from the study will help in building the knowledge and understanding of research priorities in IYCF-E. This piece of work will be used by the Emergency Nutrition Network to advocate for further research in IYCF-E.

What if something goes wrong? *If you have a concern about any aspect of this study, you may email me, the main researcher, [redacted]@student.lshtm.ac.uk.*

Can I change my mind about taking part?
Yes. You can withdraw from the study at any time. During the interview, you can also choose to skip a question or end the interview at any time. If you withdraw from the study after I have collected the data, I will destroy all your recorded interviews. However, if you withdraw consent once the data has been anonymised, I will be unable to identify your data so will need to use the data collected up to your withdrawal.

What will happen to the information collected about me?
All information collected about you will be kept private. Identifiable information will include your name, email address and occupation (place of work and job title). Only the study staff and authorities who check that the study is being carried out properly will be allowed to look at information about you. I will keep all information about you safe on secure data servers. At the end of the project, the raw files (notes, recordings etc.) will be permanently deleted. An anonymised data file (without any of your identifiable information) will be stored on LSHTM Compass.

What are your choices about how your information is used?
You can stop being part of the study at any time, without giving a reason, but as mentioned above if the data has been anonymised, I will keep information about you that I already have.

I need to manage your records in specific ways for the research to be reliable. This means I won't be able to let you see or change the data I hold about you. However, once the interview is complete I will send you the transcript, should there be any corrections you wish to make I ask that you contact me as soon as possible. If I do not hear back from you within 48 hours I will assume you are satisfied with the transcript and do not wish to make any corrections.

Where can you find out more about how your information is used?
You can find out more about how we use your information

- *At https://www.lshtm.ac.uk/files/research-participant-privacy-notice.pdf*
- *by emailing me on [redacted]@student.lshtm.ac.uk*
- *by sending an email to DPO@lshtm.ac.uk*

What will happen to the results of this study?
They will form part of a summer project dissertation, which I will share with you for your information once it has been marked. You are welcome to feedback on this document. I also intend to submit for publication to a peer reviewed journal.

Who is organising and funding this study?
London School of Hygiene & Tropical Medicine is the sponsor for the research and they have full responsibility for the project including the collection, storage and analysis of your data, and will act as the Data Controller for the study. This means that they are responsible for looking after your information and using it properly.

Who has reviewed this study?
All research involving human participants is looked at by an independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given favourable opinion by The London School of Hygiene and Tropical Medicine Research Ethics Committee (ref: 26757).

Further information and contact details
Thank you for taking the time to read this information sheet. If you think you will take part in the study please read and sign the consent form.

If you would like any further information, please contact me who can answer any questions you may have about the study.

9.4 Consent Form

Title of Project: An update on research priorities in infant and young child feeding in emergencies: A qualitative study

Name of researcher responsible for project: [redacted]

Statement	Please initial
I confirm that I have read and understood the information sheet dated 12 September 2019 (version 2) for the above-named study. I have had the opportunity to consider the information, ask questions and have these answered satisfactorily.	
I understand that my consent is voluntary and that I am free to withdraw this consent at any time without giving any reason and without my/the participant's medical care or legal rights being affected.	
I understand that data about/from me/the participant may be shared via a public data repository or by sharing directly with other researchers, and that I will not be identifiable from this information	
I agree to take part in the above-named study.	

Printed name of participant	Signature of participant	Date

Printed name of person obtaining consent	Signature of person obtaining consent	Date

9.5 Interview Guide

Note: This guide is not intended to be followed verbatim. It is designed as a guide to structure the interview and ensure consistency while allowing for flexibility to explore additional topics as they arise. Questions are subject to change depending on the specific circumstances.

Pre-interview

- Send a reminder to the participant the day before
- Ensure the participant has signed and returned the consent form.
- Ensure the internet connection is stable.
- Ensure video recording is functional by running a pilot recording just before the interview.
- Ensure a notebook is ready and dated for this interview.

Underlined and italics represents reminders to the interviewer, not to be read out to participants

BEGINNING THE INTERVIEW

How are you? Thank you for taking the time for this interview.

My name is [redacted], and I am an MSc student at LSHTM currently studying Nutrition for Global Health. I am a registered dietitian from [redacted]. Before coming to the MSc, I worked as a [redacted]

Did you have a chance to read through the 10 research priorities that I sent via email?

As a reminder: The project aims to determine the extent to which the ten research priorities, as proposed by Prudhon et al. (2016), of infant and young child feeding in humanitarian emergencies (IYCF-E) have been realised.

In doing so I am interested in finding out where you feel there are important gaps in research in IYCF-E. This information will be used to guide researchers on what evidence is needed to usefully inform current practice.

I am also interested in understanding the extent to which current research is communicated to practitioners and if or how it shapes current practice. I would like to know where you feel there are gaps in knowledge of current research (by yourself, your colleague/ organisation, or in general practice), and what can then be done to bridge those gaps.

Once we start the recording, I will ask you to introduce yourself. During the interview, I will be taking notes so if I pause or look down you know what I am doing.

Before we do that, do you have any questions regarding the information sheet or consent form? I just want to reiterate that everything you say will be kept anonymous. Your quotes from this interview may be used in the final study, but they will be anonymised. Once the transcript is complete, I will email it to you in case you have any corrections.

If at any point you would like to stop the interview, we can do so. Do you mind if I start the recording?

Start recording

INTRODUCTION

1. Where are you currently working?
   - What is your position there?
   - And for how long have you been in that role?

2. What is your educational background?

3. How long have you worked with infant and young child feeding in emergencies (IYCF-E)?
   - Do you mind expanding a little about your experience?

   Note the topics the participant works on using the list of 10 research priorities

4. Are you currently working on research on IYCF-E, or have you done so in the past?
   - If yes – is that more operational or academic research?

OBJECTIVE 1:

Using Prudhon et al.'s ten research priorities, explore the perceptions of those working in IYCF-E on current research and gaps in knowledge on the topic

OBJECTIVE 2:

Explore and contrast the perceptions of researchers and practitioners in IYCF-E, on why some research priorities may have been answered while others remain unanswered

***Continual probe**:* Do you think this is a general issue in IYCF or specific to IYCF-E

The focus of the following few questions will be on Prudhon et al.'s list of 10 research priorities.

1. Let's first chat about the topics that you are most experienced in or knowledgeable about, which you mentioned as *XXX* ***[insert topics mentioned during the introduction – if did not mention then ask:*** which of these are you most experienced in or have more knowledge about]

1.1. Which of these do you think have been sufficiently answered, or answered in part? ***[Make note of]***

For each topic: Let us start with XX

- Why do you think this topic has been so well researched? What are the enabling factors?
- To what extent do you think others in the IYCF-E community know about this research? Why do you think that is?
- How has this evidence been used to inform policy or practice, if at all?
- Are there any remaining gaps on this topic? Or, given what we now know, what is the next step of research in this area? What else do we need to know?

1.2. Which of these has not been well answered? ***[Make note of]***

- Do you think this is a problem? Do you think it should be more of a priority? Why do you think so?
- Why do you think there has been less work on this topic?
- Are there any specifics that you would like to see in these under-researched topics? For example, countries or contexts where you feel this research would be particularly helpful?

2. Now I would like to chat about the topics for which you have less experience or knowledge, which would be those remaining, namely XX ***[insert remaining topics]***. Is this correct?

- Do you think that your lack of experience on this topic reflects the lack of priority given to this topic within the ICYF-E community as a whole? Or is it something you know others work on, but you don't personally work on much?

Let's just review what we have discussed. You feel that out of the 10 research priorities, the following have been answered XXX [*List the priorities that the participant specified as being answered]*. And the following are remaining to be answered XXX [*List the priorities that the participant specified as being unanswered].*

OBJECTIVE 3:

Determine the perceptions on the relevance of Prudhon et al.'s ten research priorities and whether there are additional priorities to consider

1. Considering all the things we have discussed so far, of the research priorities that you have identified as being unanswered, what do you think should be prioritised now?
   - Why do you say so?

2. Do you think any of these unanswered priorities are not relevant anymore?

- Would you like to elaborate on why you say so?

3. Do you think there are research priorities that are not listed there that should be?

Lastly, is there anyone with relevant experience that you would suggest I interview for the study?

Thank you for your time. I will forward you this transcript once it is completed. If you have any corrections, then please let me know. If you are interested, I can forward you the completed project once it has been returned from marking.

9.6 Codebook

Name	Description	Files	References
1- Cash transfer breastmilk substitutes		10	25
Miscellaneous		1	1
Contradictions in policy		1	1
Requires rewording or combining with breastmilk substitutes priority	Participants need to express that the priority as it currently stands is not meaningful and/or needs to be combined with priority 4	7	12
Unanswered priority	Participant must explicitly state that they feel that there is insufficient evidence on the extent that cash transfers are used to purchase breastmilk substitutes	8	9
Why we don't have the research	Participants' thoughts on reasons for the lack of evidence	2	3
Fear over what may happen		1	1
Have the data but it's not compiled		1	1
2- Complementary feeding		11	37
Aspects answered but still insufficient evidence		9	13
Contexts where it's needed		4	4
Fragile		1	1
Middle- and high-income countries need evidence too		2	2
Where acute malnutrition is not an issue		1	1
Miscellaneous		2	2
IYCF-E research more necessary than IYCF		1	1

Name	Description	Files	References
More funding for research in commercial complementary foods		1	1
One of the most important of the priorities	Participants must specify that is is a “main”/“important”/“top”/“high” etc. priority	6	7
Previously neglected	Participants must state that complementary feeding has been neglected in the past compared to another aspect of IYCF	6	8
Why we don't have the research		3	3
Complementary feeding sits under multiple sectors		2	2
No commercial gain in some of them		1	1
3- Long term effects IYCF interventions		10	17
A priority		2	2
Acute is more of a priority		8	10
Challenges in researching		3	5
Difficulty follow up long term		1	1
Monitoring and evaluation challenges		2	2
No funding for long term		2	2
4- Effectively design IYCF-E programmes where breastmilk substitute use is high		10	27
One of the most important of the priorities		7	10
Part answers, but more to be done		6	6
Rewording or combination required		1	3

Name	Description	Files	References
Why we don't have the research		6	8
Different opinions within organisations on how to manage		1	1
Ethical challenges		1	1
Hesitancy		3	3
It's only becoming more of a priority now		2	3
Ukraine may offer opportunity to study		4	5
5- Re-lactation interventions		9	15
Have operational guidance or grey literature		5	5
Lack of evidence but still a priority		9	10
6- Effective psychological support		9	22
Have operational guidance or grey literature		6	7
Lack of evidence on effectiveness or impact		2	4
Not a priority		1	1
Split into lactation support and trauma counselling		1	1
Still a priority		8	9
7- Potential beneficiaries and coverage		9	9
Tools available so less of a priority		9	9
8- RTU vs powdered		11	15

Name	Description	Files	References
Have operational or grey literature		3	3
Not a priority, aspects are known		8	8
Still a priority		3	3
Why we don't have the research		1	1
Industry lobbied against		1	1
Lack of will and funding		2	2
Not yet at the point of RTU vs powdered		1	1
9- Calculate impact IYCF-E programme		5	5
Important for advocacy		5	5
10 - Effectively link and mainstream		10	18
Have operational or grey literature		4	4
Lack of evidence on effectiveness or impact		4	4
Still a priority		10	10
Why we don't have the research		0	0
Complex		1	1
Lack of motivation from other sectors		1	1
Silos		3	3
Additional priorities		6	11
Gender		2	2
Women's empowerment impact on IYCF practices		1	1
Male involvement in IYCF-E		1	1

Name	Description	Files	References
Health systems related		2	2
Acceptability and feasibility of IYCF-E within existing health systems		1	1
Best time points to target IYCF-E counselling		1	1
Maternal nutrition status role in IYCF nutrition status in emergencies		2	2
Other child health topics		2	2
ECD		1	1
Integration with play		1	1
Miscellaneous		1	1
Wet nursing		1	1
Lactating women in infectious disease research		1	1
Funding into human resources (lactation consultants or breastmilk substitutes)		1	1
The general lack of research in IYCF-E	Participants must mention that there is a lack or highlight reasons for the lack of evidence	8	29
Irregular, sparse and poor-quality evidence		5	9
Lacking impact evaluations		6	7
Limited resources and data		6	9
More interest in acute malnutrition		3	4

9.7 Consolidated Criteria for Reporting Qualitative Studies (COREQ): 32-Item Checklist [59]

No	Item	Guide questions/description	Section reported (pag e)
Domain 1: Research team and reflexivity			
Personal characteristics			
1.	Interviewer/facilitator	Which author/s conducted the interview or focus group?	3.1.1 (18)
2.	Credentials	What were the researcher's credentials? *e.g. PhD, MD*	3.1.1 (18)
3.	Occupation	What was their occupation at the time of the study?	3.1.1 (18)
4.	Gender	Was the researcher male or female?	3.1.1 (18)
5.	Experience and training	What experience or training did the researcher have?	3.1.1 (18)
Relationship with participants			
6.	Relationship established	Was a relationship established prior to study commencement?	3.1.2 (18)
7.	Participant knowledge of the interviewer	What did the participants know about the researcher? *e.g. personal goals, reasons for doing the research*	3.1.2 (18)
8.	Interviewer characteristics	What characteristics were reported about the interviewer/facilitator? *e.g. Bias, assumptions, reasons and interests in the research topic*	3.1.2 (18)
Domain 2: Study design			
Theoretical framework			
9.	Methodological orientation and Theory	What methodological orientation was stated to underpin the study? *e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis*	3.2.1 (18)
Participant selection			
10.	Sampling	How were participants selected? *e.g. purposive, convenience, consecutive, snowball*	3.2.2 (19)
11.	Method of approach	How were participants approached? *e.g. face-to-face, telephone, mail, email*	3.2.2 (19)
12.	Sample size	How many participants were in the study?	3.2.2 (19)
13.	Non-participation	How many people refused to participate or dropped out? Reasons?	3.2.2 (19)
Setting			
14.	Setting of data collection	Where was the data collected? *e.g. home, clinic, workplace*	3.2.3 (20)
15.	Presence of non-participants	Was anyone else present besides the participants and researchers?	3.2.3 (20)
16	Description of sample	What are the important characteristics of the sample? *e.g. demographic data, date*	3.2.3 (20)
Data collection			
17.	Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested?	3.2.4 (20) Appendix 6 (57)
18.	Repeat interviews	Were repeat interviews carried out? If yes, how many?	3.2.4 (20)
19.	Audio/visual recording	Did the research use audio or visual recording to collect the data?	3.2.4 (20)
20.	Field notes	Were field notes made during and/or after the interview or focus group?	3.2.4 (20)
21.	Duration	What was the duration of the interviews or focus group?	3.2.4 (20)
22.	Data saturation	Was data saturation discussed?	3.2.2 (19) 3.2.4 (20)
23.	Transcripts returned	Were transcripts returned to participants for comment and/or correction?	3.2.4 (20)
Domain 3: analysis and findings			

Data analysis			
24.	Number of data coders	How many data coders coded the data?	3.3 (21)
25.	Description of the coding tree	Did authors provide a description of the coding tree?	3.3 (21)
26.	Derivation of themes	Were themes identified in advance or derived from the data?	3.3 (21)
27.	Software	What software, if applicable, was used to manage the data?	3.3 (21)
28.	Participant checking	Did participants provide feedback on the findings?	3.3 (21)
Reporting			
29.	Quotations presented	Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? *e.g. participant number*	4 (22-33)
30.	Data and findings consistent	Was there consistency between the data presented and the findings?	4 (22-33)
31.	Clarity of major themes	Were major themes clearly presented in the findings?	4 (22-33)
32.	Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes?	4 (22-33)

9.8. Care Form

LSHTM Ethics Application & CARE Form

Project Information

Staff members/students based at:

- (•) LSHTM
- ( ) MRC Gambia@LSHTM (For LSHTM staff/students requiring SCC/MRCG EC review, please select this option)
- ( ) MRC Uganda@LSHTM
- ( ) Other external applicant applying to the SCC/MRCG EC only

1. Full project title

An update on the research priorities of infant and young child feeding in emergency settings: A qualitative study

1a. Basic project information will be made available on the LSHTM website following a favourable ethical opinion. Do you require your project information to be withheld? (see information icon for details on the information that will be made available) (this does not apply to MSc student projects).

- ( ) No
- ( ) Yes
- (•) Not applicable (MSc student)

2. Is this Project in fulfillment of a degree?

(•) Yes ( ) No

2a. Degree registered for

MSc

2e. Indicate student type

- ( ) Distance Learning
- (•) Face-to-Face or Intensive Online

2f(MSc) Is this an original submission, or are you responding to a request for clarification or insufficient information notification from the LSHTM Ethics Committee?

- ○ Original submission
- ◉ Responding to the Ethics Committee

2f(i-MSc) Please upload a covering letter responding to the committee's comments (please use the same format as that shown in the template cover letter available under Help-Templates). Please upload all amended documents in the relevant section of the form.

Documents

Type	Document Name	File Name	Version Date	Version	Size
Covering Letter	Letter of clarification_[redacted]	Letter of clarification_[redacted]	04/07/2022	1	260.7 KB
Covering Letter	Letter of support - ENN_[redacted]	Letter of support - ENN_[redacted]	04/07/2022	1	524.8 KB

Student Details

3a. Student details

Title	First Name	Surname
Miss	[redacted]	[redacted]

Telephone: [redacted]

Email: [redacted]

3a(i). Please provide your student ID number

[redacted]

3a(ii). MSc course

Nutrition for Global Health

3a(iii). Indicate proposed project length:

- ◉ Standard
- ○ Extended

3b. Are you studying as a full or part time student?

Full time

3c. Supervisor's name.

3c (i). Supervisor's email address (if more than one, please only provide the email address of your main supervisor)

Email

3 c(ii). Supervisor's institution

- (•) LSHTM
- ( ) MRC Gambia or Uganda
- ( ) Other

3e. Supervisor status

Confirmed

Project Type

Note: Completing the filter will enable and disable sections of the form so you may not see all questions.

4. Does the research involve primary data collection, analysis of data/samples that have already been collected, or a mix of both?

- (•) Primary
- ( ) Previously collected data/samples
- ( ) Mixed

4a. Is this research project classed as interventional or observational?

- ( ) Interventional
- (•) Observational

4a(ii). Select type of project:

Project involving qualitative methods only (e.g. Interviews)

4c. Does the project involve extraction of data from patient records (e.g. medical, social care, service user records)? (This refers to primary data collection from records and does not include data that was previously collected and is now being used in a secondary analysis).

- ○ Yes
- ◉ No

6. Does this project require review by the Commercialisation and Rapid Response (CaRR) ethics committee? (please see info icon for the remit of this committee)

- ○ Yes
- ◉ No

Samples

6a. Does this research project involve the collection, or use of previously collected, human tissue samples e.g urine, stool, blood etc? (Please select yes even if the samples are not considered relevant material under the Human Tissue Act)

- ○ Yes
- ◉ No

6b. Will this project involve living animals (either laboratory, livestock or wild animals) AND/OR biological material that has been obtained from animals in the experiments planned?

- ○ Yes
- ◉ No

Fast-Track

7a. Will this project be conducted in conjunction with NHS staff, premises or any other connection to the NHS?

- ○ Yes
- ◉ No

7b. Is this application for fast-track? Please see information icon for which projects are eligible. Note: MSc applications are not eligible for fast-track.

○ Yes
◉ No

Vulnerable Groups

8(i). Does this research project involve vulnerable groups? Vulnerable groups include: children, individuals with mental disability or learning difficulties, pregnant women, prisoners, refugees and internally displaced populations etc (see information icon for full description).

○ Yes
◉ No

Security Sensitive Research Material

9. Does this research involve access to and/or storage of security sensitive research material? Please note that while some data is considered sensitive, such as HIV status, it is not necessarily considered security sensitive. If you are using data that could be considered sensitive, but not security sensitive please answer no to whether your research involves access to and/or storage of security sensitive research material. Please see information icon for what is considered security sensitive material.

○ Yes
◉ No

Geography

10. List the countries where the research project is to be conducted (For example: if you are conducting a secondary data analysis for your project and you will be based in the UK, select UK regardless of where the original data has come from):

United Kingdom

Please be aware that all primary health research conducted in the UK requires a sponsor. Please contact the RGIO at RGIO@lshtm.ac.uk for more information on sponsorship.

Outline

Note: Please do not copy and paste directly from the protocol. Applications where large portions of text have been copied and pasted directly from the protocol, and therefore do not properly answer the question, will be invalidated

11. **Proposed start date of the project**

16/06/2022

11a. **Proposed end date of the project**

30/09/2022

12. **Give a lay outline of the proposed project, including background to the proposal. Include information from any systematic reviews that have been conducted. Sufficient detail must be given to allow the Committee to make an informed decision without reference to other documents, and the outline should be written in such a way that lay members of the committee can make an informed decision.**

The background/rationale:

A humanitarian emergency is a widespread adverse event that negatively impacts the health and safety of a large group of people; examples include conflict, famine and natural disasters (Humanitarian Coalition, 2015). Infant and young child feeding in emergencies (IYCF-E) involves supporting the nutritional requirements of children from birth to the age of 2 years in humanitarian emergencies (Gribble, 2015). This includes, amongst other matters, the promotion of breastfeeding, guiding the appropriate use of breastmilk substitutes and the safe introduction of complementary foods. When working with members of the population as vulnerable as infants and young children, it is imperative that the interventions and programmes are evidence-based. Prudhon et al. (2016) published a qualitative study that used feedback from experts in the field, and the Child Health and Nutrition Research Initiative method, to determine ten research priorities in IYCF-E. Examples include the use of cash transfers to buy breast milk substitutes, the effectiveness of complementary feeding strategies, and the provision of psychological support to young children's caretakers. According to the author, there was little evidence to guide programmes on the most appropriate approach to take in this context at the time of publishing. Now six years down the line, humanitarian emergencies continue to ravage different populations worldwide, and arguably climate change in the coming years could worsen this. To ensure that research is being conducted on the most critical aspects of this topic and identify where the gaps may lie, an investigation into what progress has been made on these research priorities is required.

Study aim:
This study aims to determine the extent to which the ten research priorities, as proposed by Prudhon et al. (2016), of infant and young child feeding in humanitarian emergencies have been realised.

Objectives:
1. To explore current perceptions on the research priorities and gaps in knowledge in IYCF-E
2. To identify whether progress has been made on the research priorities as specified by Prudhon et al. (2016) in IYCF-E, whether these research priorities are still relevant and whether there are additional priorities to consider
3. To explore whether there are differences between stakeholders on what are considered to be the current research priorities in IYCF-E

Design:
This is a qualitative study that will entail primary data collection of semi-structured interviews with various stakeholders (researchers, programme implementers etc.) working in IYCF-E. Participants will be recruited through non-probability purposive sampling to ensure a variety of stakeholders are included. Participants will be identified by the researcher's external supervisor, [redacted], through her position at the organisation Emergency Nutrition Network. Participants will be contacted via email and provided with an information sheet and consent form. Should the participant consent to take part they will complete the form and send it back via email. At the start of the interview, participants will have the information sheet explained to them, they will be told they may stop the interview at any time and they will be explained how the data will be used in the study. At the end of the interview, consent will be obtained for the researcher to contact the participants for clarification or follow-up questions if required. Semi-structured interviews are an appropriate method to allow for the collection of data on the predetermined themes of perceptions and knowledge on the topic while allowing for a certain amount of flexibility in the conversation. The sample size will be 12 to 15, which is anticipated to be sufficient for thematic saturation. Interviews will be conducted by the researcher via Zoom and transcribed. Zoom interviews (audio and video) will be recorded and saved on the researcher's personal laptop. Additional observational notes will be made when reviewing the recordings during the transcription process. All data will be password encrypted and only accessible by the researcher. After transcription, all participants' data will be anonymised by means of a numbering system from 1 to 15. After which recordings of interviews will be deleted. Themes will be coded and analysed using NVivo software. Data will first be analysed deductively using Prudhon et al. (2016) IYCF-E research priorities, then additional themes identified inductively. Reporting will be guided by Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups (Tong, Saingsbury & Craig, 2007). Anonymised data file will be stored by internal supervisor, [redacted]on LSHTM Compass. Findings of the research project will be written up in the researcher's MSc summer project, which will be shared with the organisation Emergency Nutrition Network and the participants.

12a. Upload the study protocol (compulsory for staff and doctoral students), including data collection forms, questionnaires and topic guides. Please upload each document separately, ensuring that the date and version number of each document is correct.

Documents

Type	Document Name	File Name	Version Date	Version	Size
Protocol / Proposal	Topic guide_Final	Topic guide_Final .docx	21/04/2022	1	18.9 KB

13. State the intended value of the project, detailing why the topic is of interest or relevance. If this project or a similar one has been done before what is the value of repeating it? Give details of overviews and/or information on the Cochrane database. This area is of increasing importance – please ensure you give a full response.

Considering the breadth of the definition of humanitarian emergencies, it is difficult to determine precisely how many people are affected by humanitarian emergencies each year. However, it is estimated that 235 million people required assistance in 2021, with the expectation that this will increase to 274 million in 2022 (United Nations Office for the Coordination of Humanitarian Affairs, 2021). Such emergencies threaten infant and young children's health, and the ability of their caretakers to access healthcare. This is often compounded by other factors such as food insecurity, poor sanitation and hygiene, and possible permanent displacement. The biggest of these threats to health for infants and young children include diarrhoea, respiratory tract infections, and malnutrition (Carothers & Gribble, 2014), most of which are related to their nutritional intake and status. Despite the severity of the problem, there remains a lack of evidence on certain research priorities within IYCF-E. This project will use qualitative methods and a variety of experts in IYCF-E to determine to what extent Prudhon et al (2016) research priorities have been met and what the current research priorities are. This will provide a basis for the advocacy of research within these areas going forward. Furthermore, it will build on the evidence

14. Hypothesis statement.

NA

15. Overall aim of project

This study aims to determine the extent to which the ten research priorities, as proposed by Prudhon et al. (2016), of infant and young child feeding in humanitarian emergencies have been realised.

16. Specific objectives of project

1. To explore current perceptions on the research priorities and gaps in knowledge in IYCF-E
2. To identify whether progress has been made on the research priorities as specified by Prudhon et al. (2016) in IYCF-E, whether these research priorities are still relevant and whether there are additional priorities to consider
3. To explore whether there are differences between stakeholders on what are considered to be the current research priorities in IYCF-E

Methods

Note: Please do not copy and paste directly from the protocol. Applications where large portions of text have been copied and pasted directly from the protocol, and therefore do not properly answer the question, will be invalidated

18. Specify the procedures/methodology to be conducted during the project. Please include outcome measures and plans for data management and analysis. For literature reviews, include details on search strategy, search terms, inclusion and exclusion criteria.

This will be a qualitative study with primary data collection of between 12 and 15 semi-structured interviews. They will be conducted using the video-conferencing software Zoom. A pilot interview will be carried out beforehand to determine the length of time and ensure that the software is operational. I researcher's external supervisor will identify potential participants and email the contact details to the researcher. The researcher will email the potential participants with an attached information sheet and consent form. Once the participants have signed the consent forms and have returned them to the researcher via email, the interviews will be scheduled around the participants' schedules. The researcher will send a link for the Zoom meeting and a confidentiality statement to the participant. During the meeting, the researcher will use the attached topic guide with interview questions and probes to gain further details if required. At the start of the meeting, participants will be reminded that the meeting will be recorded and that their answers will be anonymised. Transcription will be done by Zoom. After the interview, the researcher will review the transcription with the recording to ensure accuracy. The data will be stored on a password-protected device that only the researcher will have access to.

The researcher will allocate each participant a number to identify them, after which their personal details on the transcriptions will be erased. Once the transcriptions and analysis are completed, all meeting recordings and related data will be permanently deleted. Transcriptions will be entered into NVivo computer software, where they will be analysed. The Framework Method will be used to identify themes, determine a thematic framework and code the data. Reporting will be guided by Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups (Tong, Saingsbury & Craig, 2007).

20. Please specify the total number of participants to be recruited into the research project.

12 to 15

20a. Please provide the scientific justification for the sample size. Please include justification for the age, gender, source and method of recruiting participants for the research project.

It has been suggested that thematic saturation with sufficient probing can be reached by 12 participants (Weller et al., 2018). This is the point that no new ideas or themes are generated by interviews in qualitative research. This study will aim for a sample size of 12 to 15, which is anticipated to allow for thematic saturation. It will also allow for the sample to include participants from a variety of backgrounds within IYCF-E (researchers, programme implementers etc.) to allow for insight into the varying perceptions and knowledge amongst the different groups. Participants will be selected by non-probability purposive sampling to ensure a variety of backgrounds within IYCF-E. Participants will be identified by the researcher's external supervisor, [redacted] through the organisation (Emergency Nutrition Network) that she is employed as they have access to individuals working in the field of IYCF-E. The participants will be selected based on their work in IYCF-E, therefore they may be a mix of genders and ages. The researcher will send the potential participants an information sheet and consent form to be signed.

23. In terms of the feasibility of your project, what could stop this project from succeeding, or prevent you from achieving your objectives? *Please indicate any aspects of your proposed approach which could potentially experience difficulties, e.g. delays with permissions, data collection or storage problems, lack of sufficient comparable information, etc. You may also wish to mention any wider matters which could affect your project, e.g. civil unrest, natural disasters, transport availability.

Due to time constraints, any occurrence that delays ethics approval, the receipt of consent forms or the scheduling of interviews would impact the ability to complete the project's objectives. If interviews were delayed for any reason, such as scheduling conflicts or technological difficulties, it would reduce the amount of time spent on analysis, which may hinder the overall quality of the project. If data became corrupted and lost, interviews would not be able to be rescheduled therefore the project would not be able to move forward.

24. What alternative plans do you have in case you encounter any of the potential problems you have identified? Please troubleshoot all points raised in question 25.

A schedule will be drawn up to ensure that:
1. The ethics application is submitted for approval within the allotted time.
2. Once ethics approval has been received, potential participants are contacted, and consent forms are signed as soon as possible.
3. interviews are scheduled well in advance to prevent scheduling conflicts.

In order to prevent data from being lost/corrupted, a backup will be kept by internal supervisor, Helen Harris-Fry, on MyFiles.

25. What specific facilities or resources will you personally expect to make use of for your project (eg a local university library, lab facilities, project placement with a specific organisation etc)?

Personal place of residence will be used to conduct the interviews. Zoom computer software will be used to conduct, record and transcribe interviews. NVivo computer software will be used to code and analyse data. The university library and researcher's residence library will be used to write the project up.

27. List key references (no more than 5), including for methods to be used.

1. Prudhon, C, Maclaine A, Hall A, Benelli P, Harrigan P, & Frize, J (2016) 'Research priorities for improving infant and young child feeding in humanitarian emergencies', BMC Nutrition, 2(1), pp. 1–9. doi: 10.1186/s40795-016-0066-6.
2. Prudhon, C, Benelli, P, Maclaine, A, Harrigan, P, & Frize, J (2018) 'Informing infant and young child feeding programming in humanitarian emergencies: An evidence map of reviews including low and middle income countries', Maternal and Child Nutrition, 14(1), pp. 1–13. doi: 10.1111/mcn.12457.
3. Green, J & Thorogood, N (2018) Qualitative methods for health research. 4th edition. London: SAGE.
4. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. Int J Qual Heal Care. 2007;19(6):349–57.
5. Jordan Z, Lockwood C, Munn Z, Aromataris E. The updated Joanna Briggs Institute Model of Evidence-Based Healthcare. Int J Evid Based Healthc. 2019;17(1):58–71.

Risks and Discomforts

29. Give details of all clinical and non-clinical procedure(s) that will be received by participants as part of the research protocol. Non-clinical procedure(s) can include seeking consent, interviews, non-clinical observations and use of questionnaires. Clinical procedure(s) can include uses of medicinal products or devices, other medical treatments or assessments, mental health interventions, imaging investigations and taking samples of human biological material. Include procedures which might be received as routine clinical care outside of the research.

Non-clinical procedures will include seeking consent by means of a signed consent form sent via email prior to the interview as well as semi-structured interviews with the use of a topic guide. No clinical procedures will take place.

29a. Please provide details of who will conduct the procedure, the average time taken per procedure (minutes, hours or days) and where it will take place.

I (the researcher) will be receiving consent and conducting the interviews with participants. The interviews will be between 45 and 60 minutes. They will take place online via Zoom computer software.

29b. State the potential discomfort, distress or hazards that research participants may be exposed to (these may be physical, biological and/or psychological) as a result of all procedure(s).

The respondents may feel uncomfortable or be embarrassed about not being knowledgeable or up-to-date on a certain research topic.

29c. What precautions are being taken to control and modify these? Include information on hazardous substances that will be used or produced, and the steps being taken to reduce risks.

I (the researcher) will help them to feel comfortable and at ease by ensuring they understand that I am interested in knowing where the communication gaps are in connecting research to practice. I will make it clear to them that they are free to end the interview or skip a question at any time.

Experience

30. State the personal experience of the applicant and of senior collaborators in the research project in the field concerned, and their contribution to this project. Indicate any previous work done related to the project topic including student and/or professional work, or publications

The researcher is a registered dietitian and has worked in rural areas and informal settlements across [redacted] where infant and young child feeding is severely compromised. She has counselled many caregivers on the topics that are common to IYCF-E, such as breastfeeding and the use of breastmilk substitutes in areas of poor sanitation, the use of cash transfers for purchasing breastmilk substitutes, and the provision of psychological support to caregivers in contexts similar to emergencies. The external supervisor on the project, [redacted], has over twelve years of experience working in nutrition in emergencies. The internal supervisor on the project,
LSHTM [redacted]

30a. Upload the CVs for all main investigators working on the project. For MSc students, please upload your CV only.

Documents

Type	Document Name	File Name	Version Date	Version	Size
Investigator CV	Curriculum Vitae_[redacted]	Curriculum Vitae_[redacted]	29/03/2022	1	30.0 KB

30e. Have the main investigators undertaken any Research Ethics/Human Subjects Protection training (either online or face to face)? It is recommended that all applicants and members of their research team should complete ethics training at least every 3 years to account for changes in guidelines and regulations. Links to online training can be found in the information icon. (Please note this is not the same as GCP training).

(•) Yes

( ) No

30e(i). Please upload a copy of the certificate(s)

Documents

Type	Document Name	File Name	Version Date	Version	Size
Other	Research_Ethics_online_training_certificate	Research_Ethics_online_training_certificate.pdf	29/03/2022	1	164.9 KB

Informed Consent - Primary

General note: If any photographs are to be taken, whether for teaching or research purposes, ensure that the participant's consent to their use has been given in line with the provisions in British Medical Journal, 1998, 316, 1009-1011.

32. Who will be responsible for taking consent and what training/experience do they have?

The researcher will be responsible for taking consent. She has three years of work experience in maintaining confidentiality while working with patients in various hospital and community settings.

32a. Will you be obtaining written consent?

- (•) Yes
- ( ) No

32a(i). State the manner in which consent will be obtained (how and from whom). Where appropriate, state how the information and consent form will be translated into local languages.

Consent will be obtained by participants completing a consent form that will be emailed to them. They will email the completed form directly back to the researcher. It is expected that all participants will be fluent in English, therefore no translations are required.

32b. Do you expect any of your potential participants to be illiterate?

- ( ) Yes
- (•) No

32f. Please upload the information sheet(s) and consent form(s). Please upload each document separately, ensuring that the date and version number of each document is correct.

Documents

Type	Document Name	File Name	Version Date	Version	Size
Information Sheet	Consent form for participant and representative	Consent form for participant and representative .docx	31/03/2022	1	533.2 KB
Information Sheet	Participant Information Sheet_Final	Participant Information Sheet_Final.docx	06/04/2022	1	1.2 MB
Information Sheet	Topic guide_Final	Topic guide_Final .docx	06/04/2022	1	18.9 KB
Information Sheet	Letter of support - ENN_[redacted]	Letter of support - ENN_[redacted]	04/07/2022	1	524.8 KB

32g. Upload recruitment procedures (eg advertisements, emails, posters). Please upload each document separately, ensuring that the date and version number of each document is correct.

Documents

Type	Document Name	File Name	Version Date	Version	Size
Advertisements	Recruitment e-mail	Recruitment e-mail.docx	31/03/2022	1	13.2 KB

Payments

37. Will payments be made to participants? These should usually not be for more than travelling expenses and/or loss of earnings and must not represent an inducement to take part.

- ○ Yes
- ◉ No

Confidentiality & Data

39. Specify how confidentiality will be maintained with respect to the data collected. When small numbers are involved, indicate how possible identification of individuals will be avoided. Where data will be anonymised, specify how this will be done.

Recordings of interviews will be kept on a device that can only be accessed by the researcher and with a password. Once interviews are transcribed the recorded interviews will be permanently deleted. Transcribed interviews will be saved, coded and separated from consent and other forms of participant's identifiable information. Participants will be recognised as a number from 1 to 15 (depending on number of participants). All identifying information such as name will be removed from the transcripts. It will be explained to participants that their quotes may be used in the final study but not identified.

40. State how your data will be stored and what will be done with it at the end of the project.

Data will be stored securely on the researcher's laptop who will code and analyse the data. All documents will be password protected and no one else will have access to the password for the laptop. A backup of the anonymised transcription files will be kept by the internal supervisor, [redacted], on MyFiles. Once the project is completed all data will be deleted from the researcher's laptop computer. The researcher's internal supervisor, [redacted], will retain a copy of NVivo data file (which will be anonymised) on LSHTM Compass for archiving.

41. Are there plans to share the data, or add the data to a repository in the future?

- ○ Yes
- ◉ No

If no, please be aware of the following:

An increasing number of journals are now requiring a commitment to making the database on which a paper is based open access prior to accepting the paper(s) for publication. Explicit consent should be obtained from participants regarding the possible use of their anonymised data in the public domain via a data repository.

Funding

46. Do you have external funding for this project?

◯ Yes
◉ No

46b. How will the project go ahead without funds?

No funding is required for the project as software is either free (Zoom) or provided by LSHTM license (Nvivo).

46c. Are you in receipt of any funding from the United States? Or will you be collaborating with (or with individuals from) a US Institution/organisation?

◯ Yes
◉ No

47. Has the project been sent out for peer/independent scientific review (please select yes if the project is being sent to the SCC)?

◉ Yes
◯ No

47b. If yes, who has provided peer/independent scientific review of the project?

Peer reviewed by senior member of the LSHTM nutrition group.

49. Does the Chief Investigator or any other investigator/collaborator have any direct personal involvement (e.g. financial, share holding, personal relationship etc.) in the organisations sponsoring or funding the research that may give rise to a possible conflict of interest?

◯ Yes
◉ No

50. Will individual researchers receive any personal payment over and above normal salary, or any other benefits or incentives, for taking part in this research?

◯ Yes
◉ No

Local Approval

66. For all countries listed in Q10, please provide details of the arrangements being made to obtain local ethical and/or regulatory approval. Please electronically append copies of local approval letter(s) where this has already been obtained. Where you believe local approval is not required, please explain why not and describe any less formal permissions, invitations or support you are being given for this work. Upload local permission letters as applicable. (Where the research is to take place overseas, ethical approval must be obtained in the country(s) concerned. Approval from the LSHTM Committee is dependent on local approval having been received. You MUST NOT start your project until all relevant approvals are in place.)

Not applicable.

66a. Where the research is taking place in the UK, please list other UK Committees (including other LSHTM ethics committees) from which approval is being, or has been, sought.

Not applicable.

Data Sources, Results & Permissions

70. If you expect to use existing data, how will you obtain it? *Indicate who holds the data, who specifically you will contact, and by when. Any contact so far, especially anything confirmed in writing, should be mentioned.

Not applicable.

70a. Please upload any documents confirming that you have requested/been granted permission to use any existing data. This can include email correspondence as well as formal letters of permission. (This is mandatory for projects using existing data).

71. If you expect to use any public domain data, please give further details. *Make clear how you will gain access. Public domain data must be freely available to any member of the public, without any restrictions or requirement for special permission, and must not enable the identification of living people.

Not applicable.

71a. Please provide the links to all public domain data that you expect to use.

Not applicable.

72. Will any specific data rights permissions or usage limitations be required regarding data to be used or collected in the project?

○ Yes
◉ No

73. Will any agreements be required regarding data to be used or collected in the project (for example, material transfer agreements or data transfer agreements)?

- ○ Yes
- ● No

74. Are there any existing obligations regarding ownership of results to third parties (e.g. employer)?

- ○ Yes
- ● No

Type of risk

75. Where will the project be carried out? *Note that work away from LSHTM, your primary residence, or outside the UK means any form of work for your project, not just primary data collection. Some courses may have specific restrictions on this.

All work will take place either at LSHTM or my primary residence

76. Please indicate which locations you expect to work at. Check all that apply.

- ☐ Field Work
- ☑ Desk-based (Home, LSHTM, Office, Library)
- ☐ Lab Work
- ☐ Other work away from home

77. Will the project involve working with or handling any of the following materials?

- ☐ Pathogenic organisms
- ☐ Human tissue
- ☐ Animal tissue
- ☐ Radiochemicals
- ☐ Genetically modified organisms
- ☐ Toxic chemicals
- ☑ None of the above

78. Are any other potentially hazardous activities likely to be carried out during the project?

- ○ Yes
- ● No

Well-being

111. If you will be conducting research away from the School, and have a disability that may require support, you are encouraged to contact Studentadvice@lshtm.ac.uk in good time to discuss support options.

- ☑ I have read and understood the above information

- [x] I agree to comply with the relevant safety requirements, and will submit a separate request for LSHTM travel insurance where relevant
- [x] I agree to inform the Faculty Safety Officer and/or the Off-Site Safety Advisor (as required) if there are any changes to the risk assessment
- [x] I confirm that there are no conflicts of interest that preclude my participation in the project

Student signature

Signed: This form was signed by [redacted]

Signature - Supervisor

Supervisor signature

I declare that:

- I agree that the information submitted in this application is a reasonable summary of the proposed project.
- I agree that this form correctly indicates whether or not ethics approval will be required.
- I agree that this form contains adequate information for the ethics committee to form an opinion of the proposed project.
- I agree that all required supporting documentation is attached to this application.
- (For MSc projects only) I agree that responses in the Risk Assessment section address the main risks connected with a project of this nature
- I have reviewed the risk of the project, including travel, and agree that it is an acceptable risk to the student
- I confirm that there are no conflicts of interest that preclude my role as supervisor for this project
- I Have read and understood, and agree to abide by the LSHTM Good Research Practice policy

Signed: This form was signe[redacted]) on 06/07/2022 12:10

Signature - Course Director/Project Module Organiser

Course Director / Project Module Organiser Signature

I declare that:

- I agree that the proposed project's academic content is suitable for this MSc

Signed: This form was signed by Dr. Marko Kerac (marko.kerac@lshtm.ac.uk) on 05/07/2022 07:17

Signature - Other

Note:

The form will automatically submit upon receipt of all required signatures.

After submission, you will receive a confirmation email with further details.

If you have not received a confirmation email within 5 working days please email ethics@lshtm.ac.uk (staff) or MScethics@lshtm.ac.uk (students) to check the status of your submission.